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Why ask for the moon
when we have the stars?

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The BROOKLYN MUSEUM QUARTERLY

1-2

Index to Volume I.

March 1914 to January 1915

An illustrated magazine published quarterly, devoted to subjects of interest in Fine Arts, Ethnology, and Natural History, with special emphasis upon the activities of the Brooklyn Museum and its influence as an educational institution.

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BROOKLYN, N. Y.
The Brooklyn Institute of Arts and Sciences

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CENTRAL MUSEUM

OF

THE BROOKLYN INSTITUTE OF ARTS AND SCIENCES

Eastern Parkway and Washington Ave., Brooklyn, N. Y.

The Museum is open from 9 A. M. to 6 P. M., Monday to Saturday (inclusive). Thursday evening, from 7.30 to 9.45. Sunday afternoon from 2 to 6. The Museum is free to the public, except on Mondays and Tuesdays when the admission is 25 cents for adults and 10 cents for children under 16 years. Free on all Holidays even when these fall on Monday or Tuesday; free to teachers with their classes at all times, including pay days.

The Museum Library containing more than 20,000 volumes is open for reference daily from 9 A. M. to 5 P. M.—Sundays from 2 to 6 P. M.

The publications of the Museum comprise the Annual Report, Memoirs of Art and Archæology, Memoirs of Natural Sciences, Science Bulletin, Catalogues and Guides relating to the collections on exhibition.

To Reach the Museum: From New York; Subway Express to Atlantic Avenue, thence by St. John's Place car to Sterling Place, or by Flatbush Avenue car to Prospect Park, thence down Eastern Parkway to Museum Building.

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PUBLICATIONS OF THE MUSEUMS
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ANNUAL REPORTS.

Reports upon the Condition and Progress of the Museums, 1904 to date.

MUSEUM NEWS AND QUARTERLY.

Children's Museum Bulletin. October 1902-March 1904. *Out of Print.*

Children's Museum News. April 1904-March 1905. *Out of Print.*

The Museum News, issued monthly from October to May. Volumes 1 and 2, 1905-1907. *Out of Print.* Volumes 3-8, 1907-1913. Gratis upon application to the Curator-in-Chief, Central Museum, Eastern Parkway, Brooklyn, N. Y.

The Brooklyn Museum Quarterly. Volume 1, March 1914-January 1915.

The following publications are issued at irregular intervals, and present the original researches of the Curators and Assistants of the Museum, and work by specialists based upon the Museum Collections.

MEMOIRS OF ART AND ARCHAEOLOGY.

Each Memoir is a complete publication and is for sale individually. Orders for purchase may be addressed to the Librarian, or to the Macmillan Company, 66 Fifth Avenue, New York. Exchanges and correspondence regarding exchanges may be addressed to the Librarian, Central Museum, Eastern Parkway, Brooklyn, N. Y.

Vol. 1, No. 1, Renaissance leaning Facade at Genoa. By W. H. Goodyear. Text figures. Oct. '02 ..... $0.50

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MEMOIRS OF NATURAL SCIENCES.

Vol. 1, No. 1, Medusæ of the Bahamas. 7 pls. By A. G. Mayer, 20 May, '04 ..... $1.00

SCIENCE BULLETIN.

Each volume of the Science Bulletin contains about 400 pages of printed matter or about 325 pages accompanied by 50 plates. Each number of the Science Bulletin is sold separately. The subscription price is $3.00 per volume, payable in advance. Subscriptions should be sent in care of the Librarian of the Central Museum of The Brooklyn Institute of Arts and Sciences, Eastern Parkway, Brooklyn, New York.

VOLUME 1.

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No. 3, Atlantic Palolo. By A. G. MAYER. 1 col. pl. 13 Jan. '03 ... .25

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No. 7, Some additional New Genera and Species of Coleoptera found within the Limit of the U. S. By CHAS. SCHAEFFER.
List of Bombycine Moths from the Huachuca Mountains, Arizona. By CHAS. SCHAEFFER.
Descriptions of some New Moths from Arizona. By H. G. DYAR.
30 Dec. '05 ..... .25

No. 8, Species of Birds collected at St. Mathews Cocoa Estate, Heights of Aripo, Trinidad. By GEO. K. CHERRIE.
Descriptions of N. A. Moths and Larvæ. By H. G. DYAR.
List of Geometridæ, collected on the Museum Expeditions to Utah, Arizona and Texas, with Descriptions of New Species. By R. F. PEARSALL.
14 Jul. '06 ..... .25

No. 9, On New and Known Genera and Species of the Family Chrysomelidæ. By CHAS. SCHAEFFER.
Hemiptera from Southwestern Texas. By H. G. BARBER.
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No. 10, New Bruchidæ with Notes on known Species and List of Species known to occur at Brownsville, Texas, and in the Huachuca Mountains, Arizona. By CHAS. SCHAEFFER.
Feb. '07 ..... .25

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Notes on the Eruption of Stromboli, April, May, June, 1907. By FRANK PERRETT. Dec. '07 ..... .25

No. 12, List of the Longicorn Coleoptera Collected on the Museum Expeditions to Brownsville, Texas, and the Huachuca Mountains, Arizona, with Descriptions of New Genera and Species and Notes on Known Species. By CHAS. SCHAEFFER.
Feb. '08 ..... .25

No. 13, Second Collection of Birds from Trinidad. By GEO. K. CHERRIE. Mch, '08 ..... .25

No. 14, New Great Horned Owl from Venezuela, with Notes on the Names of the American Forms. By HARRY C. OBERHOLSER. Sep. 15, '08 ..... .10

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No. 16, New Birds from the Orinoco Region and from Trinidad. By GEO. K. CHERRIE. Jun. '09 ..... .10

No. 17, Additions to the Carabidæ of North America with Notes on Species Already Known. By CHAS. SCHAEFFER. May '10. .25

VOLUME 2.

Vol. 2, No. 1, Long Island Fauna and Flora—I. The Bats (Order Chiroptera). By ROBERT CUSHMAN MURPHY AND JOHN TREADWELL NICHOLS. June 21, 1913 ..... .15

No. 2, Long Island Fauna and Flora—II. A Long Island *Acmæa* and a New Variety of *Urosalpinx cinerea*. By SILAS C. WHEAT. July 16, 1913 ..... .10

No. 3, Long Island Fauna and Flora—III. The Frogs and Toads (Order Salientia). By FRANK OVERTON, A. M., M. D. Nov. 3, 1914 ..... .25

No. 4, A Report on the South Georgia Expedition. By ROBERT CUSHMAN MURPHY. Nov. 5, 1914 ..... .25

CATALOGUES AND GUIDES.

Catalogue of the Collection of Pictures illustrating the Life of Christ by JAMES J. TISSOT. 1901-'02 ..... .10

Catalogue of paintings. 1906, 1910, each ..... .10

Catalogue of Ancient Chinese Porcelains loaned by HENRY T. CHAPMAN, [1907] ..... .10

Guide to the Southwestern Indian Hall. 1907 ..... .05

Guide to the Exhibits illustrating Evolution, etc.; by F. A. Lucas, 1909.. .05

Catalogue of the Avery Collection of ancient Chinese Cloisonnès; by JOHN GETZ; pref. by W. H. GOODYEAR. 1912 .....paper..... 1.50

.....cloth..... 2.00

MISCELLANEOUS.

Some Books upon Nature Study in the Children's Museum Library, compiled by Miriam S. Draper, 1908; second edition 1911.

Some Nature Books for Mothers and Children. An annotated list; compiled by Miriam S. Draper, 1912.

COLD SPRING HARBOR MONOGRAPHS.

The Museum also distributes the Monographs of the Marine Biological Laboratory at Cold Spring Harbor, Long Island, of which seven numbers have been published to date.

THE
BROOKLYN MUSEUM QUARTERLY

VOL. I. MARCH, 1914 No. 1.

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MAY 12 1914
MONTAGUE BRASTON

THE BROOKLYN MUSEUM QUARTERLY

VOL I. MARCH, 1914 No. 1.

EDITORIAL ANNOUNCEMENT.

The Brooklyn Museum Quarterly is not, in the strict sense of the term, a new publication. It inherits the traditions of the Museum News, founded in 1905 by Dr. Frederic A. Lucas, and carried through an eighth volume by the lamented Edward L. Morris, late curator of the natural sciences in the Central Museum. Enlarged, illustrated, in a new typographical garb, the Quarterly differs from the older journal also in the exclusion from its pages of information relating solely to the Children's Museum. This is now published by the staff of the latter institution in the Children's Museum News which appears on the first of every month.

The Quarterly will represent, as the Museum News has in the past, the varied interests of the three departments—Fine Arts, Natural Science, and Ethnology. Its contributors will be the members of the Museum staff and the Museum's friends. It is believed that the change, which follows the natural evolution of a museum organ, will be acceptable to the readers of the publication.



LARGER PLANTS OF THE DESERT

The ocotillo, with long, wand-like branches, the cholla cactus and the palo verde. The regular size and spacing of the clumps of sage brush in the foreground is noteworthy.

PLANTS OF THE DESERT

ACCOUNT OF THE WORK PRELIMINARY TO THE PREPARATION OF A DESERT VEGETATION GROUP

PLANTS of the desert—sage brush and an occasional cactus, and not enough of either to break the monotony of the miles of level sand. This is the mental picture of most of us when we think of the desert and its plant life. We know that sage brush is a low, grayish bush and that cattle eat the leaves at a certain season of the year, and we are more or less sorry for the cattle. As for the cactus, we know that there are several varieties, and we have seen, here and there, plants of the flat leafed cactus which is often called "prickly pear." We may have seen, too, the sturdy, straight giant cactus, with its fantastic branches resembling huge arms projecting outward or upward or downward and sometimes twisted and bent.

Sand and sage brush, once in a while a spiny cactus, and then more sand! So we think of the desert. Now this is true of parts of our desert country, but how much more the desert *can* do.

It was to correct this limited conception concerning the desert and its plant life, that one museum curator recently determined to install in the Brooklyn Museum an exhibit which should show a portion of the desert with its characteristic vegetation. Accordingly, late in March of the last year, the curator and two assistants left for a visit of six weeks to the Arizona desert country. One of these was the curator's wife, who handled the photographic work involved in the construction of such a group, and the other was an artist and modeler whose time was spent in making plaster moulds for casting in wax the plants which were too fragile for shipping.

Because of desirable location in the midst of typical desert country and because of working and railroad facili-



Typical desert scenery; the plain which seems nearly level is given over to one or two shrub species with the plants all remarkably uniform in height and spacing. The plain is shut in by abruptly rising mountain ranges of pure gray granite.

ties, the grounds of the Desert Laboratory of the Carnegie Institution of Washington, two miles west of the city of Tucson, Arizona, were selected as a center of activity.

It was arranged that the party should live in four army tents pitched in pairs just at the base of Tumamoc Moun-



One of the flat leafed cacti (*Opuntia blakeana*) commonly called "prickly pears," the group most studied from the standpoint of possible economic utilization.

tain, half way up the side of which the Desert Laboratory building is perched.

The first morning, as the party trudged along the road from Tucson to the Laboratory, the woman of the expedition distinguished herself by asking anxiously: "Why in the world are there so many hundreds of telegraph poles upon Tumamoc Mountain?" The unkind men merely smiled in the most superior manner and replied: "Wait and see!" Of the state of mind of that woman when, later, the telegraph poles proved to be giant cacti (*Cereus giganteus*) without side-arms, we shall not speak! In slightly more favorable situations, the giant cactus invariably produces side-arms, but upon the stony and steep sides of the mountain, everything available of soil and water is concentrated into developing the main stem of the plant.

A week was spent in looking about the country and selecting desirable specimens to be carried into camp later, and cast in plaster. If only they who count the plant life of the desert in terms of sage brush and cactus, might have witnessed the struggles which were necessary to reduce the results of the expedition to the proportions of an ordinary freight car!

A striking peculiarity of these Arizona deserts is the habit of the various kinds of shrubs of occupying separate plains—one kind monopolizing each plain. Thus, we find one plain devoted to mesquite, another to the creosote bush, another to the choya cactus, the next to another species, and so on. The various kinds of plants do not overlap and straggle into their neighbors' territory, but, instead, the line of demarcation is very distinct. It is as if the individuals of a species delight in venturing to the very border of another's territory, to linger there like a small boy daring another to encroach.

The whole scheme of things reminds one very strongly of a nursery, so uniform is the size and the shape and so regular is the spacing of the individuals. There is a simple



THE SAGUARO TWINS

Almost without exception the giant cactus rears a stem as straight as a flag pole, but the variations of the branches or arms are innumerable. These two specimens are remarkably alike in their candelabrum branching. The centre plant is the tree choya (*Opuntia versicolor*).

explanation of this regular spacing of shrubs and clumps of grass which makes these desert individuals appear so strikingly strong and independent, with a charm which one never could feel in a land of massed vegetation. In a plain containing many thousands of creosote bushes (*Covilla tridentata*) one finds with almost unfailing regularity,

each bush separated from its neighbor by a zone of bare earth from two to eight or ten feet wide. These bushes have what is known as a closed root system—that is, under the ground there is a network of roots, and since there is not sufficient moisture to support a dense shrub growth, we find one bush every five or ten feet. This tends to make a colony of perfect individuals, uniform in size and shape and placed approximately the same distance apart. The general effect is truly charming, and as one looks down the long aisles between the rows of bushes which from February to May bear masses of yellow blossoms in a setting of dark, waxy green leaves, he feels that the geometrical design must be the work of man.

The function of the creosote bush in the desert is instantly obvious. It is the great sand-holder and preventer of dust-storms; its many branches, spreading from very near the ground, catch and hold the sand or dust. In parts of the desert, these bushes may be found partially hidden by the masses of sand they hold. As time goes on and the height of the sand increases, the bushes being slowly buried, die.

The mesquite (*Prosopis ventina*) is the one bush of the region which, under favorable conditions, develops into a real tree. In places where water is scarce it takes the form of a little bush three or four feet high but along the banks of arroyos and in places where water is more abundant it grows to a height of twenty feet or more, with a trunk a foot in diameter. The people of the region depend upon the wood of the mesquite almost entirely for fuel and it is used also in the construction of their houses.

Throughout this section one is impressed with the prevalence of the mistletoe which is a parasite and infests the mesquite trees. When the mistletoe is present in sufficient quantities the tree eventually is destroyed.

Probably the most attractive as well as one of the most common bushes of the desert is the graceful, delicate green palo verde (*Parkinsonia microphyllum*). It is one of the

most distinctive of the desert plants both in color and appearance, and its name which is Spanish and means "green tree" is well chosen. Like the mesquite, the palo verde varies in size according to the water supply available. Thus in some locations it is a small bush two or three feet high, and in others it is a relatively large tree, twelve feet high with a trunk ten inches across. The bark of the palo verde is remarkably smooth, with the sheen of satin. The leaves are very small and the terminal branches very long and pointed giving the tree a most unusual appearance. Oddly enough, this tree bears no thorns, a condition rare among desert trees.

Without question, the freak tree of the desert is the picturesque ocatilla (*Fouquiera splendens*) whose only rival in appearance and dignified mien is the giant cactus itself. The ocatilla is a tree which, as trees go, breaks all of the conventions. Instead of a large main trunk from which shorter branches radiate, this tree has a very short, thick, woody stem, entirely under ground. From the upper surface of this underground stem, just at the level of the ground, grow the long wandlike branches, varying in length to a maximum of eighteen feet, and in numbers from three to fifty or thereabouts. These branches being held together firmly at the base, droop outward towards the apex, and being covered along their entire length with dark green leaves about an inch and a half long cause the tree to present a most unusual and delightful appearance. At the very apex of each stem is borne a cluster of crimson flowers, which make one of the brightest spots of color on the desert. As the drier season approaches and the tree no longer can afford to supply moisture to its many leaves, a curious transformation takes place. The leaves dry up and drop off, all except the mid-rib, which remains in place, in the form of a thorn an inch in length. When this has been accomplished, the ocatilla is as well protected against food-seeking animals as the giant cactus itself.



Fendler's cactus (*Echinocereus fendleri*) the earliest cylindrical cactus to bloom in the vicinity of Tucson. One specimen secured by the party bore twenty-three maroon-red blossoms each three inches across.



In the museum work room. The modeler and his assistant inserting the clusters of spines in a wax model of the choya cactus. In the background are color sketches of the desert plants made while in the field.

Of course, the most striking, botanically, of all the plants of the desert are the cacti and it was with them that the modeler experienced his greatest difficulty and finally achieved his greatest success.

A specimen about sixteen feet in height was selected by the curator to represent the saguaros. Because of discoloring and shriveling in drying, it was necessary to reproduce fleshy plants like the cacti in wax. Plaster moulds of the plants were made on the spot, and the wax models made later at the museum. Consider for a moment the extreme delicacy of the work! The saguaro and the barrel cactus or bisnaga (*Echinocactus wislizeni*) and some others are built upon the plan of an accordion with little clusters of spines along the outer angles of the plaits. These spine clusters were removed from the plant, carefully numbered and labeled, and laid aside. Then the plant was cast in wax after which each little cluster of spines was inserted in its correct place on the model, according to its number and row.

In the desert group will be shown a decayed and fallen saguaro with its curious woody skeleton exposed. The structure of this cactus is worthy of note. In the center of the trunk is a mass of pulp; around this is set a cylinder of rods of tough white wood about an inch in diameter, and outside of all is the tough green epidermis, heavily studded with spines.

These giants are the favorite nesting places of the red-shafted flicker (*Colaptes cafer collaris*) the wood-pecker of the desert.

The root system of these giant cacti is decidedly interesting. The roots which radiate in all directions—sometimes for fifty feet or more—lie very near the surface of the ground, that they may absorb the more readily every bit of moisture available. Nature's adaptation of the various parts to their peculiar environment is truly marvelous! The saguaro blooms from March to June, when it is literally crowned with wreaths of white blossoms.

The most difficult cacti to pack for shipping are the members of the choya or cholla group, which are related closely to the "prickly pears," though the two are very dissimilar in appearance. In the choya cactus, there is a well-defined stem from which grow many branches, each of which is covered with long, whitish-green spines. These are of incredible strength and will pierce an ordinary shoe as readily as paper.



The desert verbena (*Verbena ciliata* Benth) growing near the tent. The masses of deep pink blossoms are brilliant examples of Nature's art.

Many rodents of the desert drag the detached joints of the choya about their burrows, thus forming an effectual barricade against their enemies.

One of the members of the choya cactus group, the tree choya, is the favorite nesting place of the cactus wren. These remarkably friendly birds which are twice as large as our shy eastern house wrens, build their nests in the center of dense masses of opuntia branches, and safe from hawks, snakes, and other marauders, lay their eggs and rear their young.

While the party was in Arizona the flat opuntias or

"prickly pears," and the cylindrical cacti came into full bloom. Of the former there are fifteen or twenty species native to the Tucson region, but the greatest confusion exists as to their identity. This group has been the subject of the most inquiry as to its possibilities for economic utilization. At present, the plants which are used for forage are rendered edible by burning off the spines.



At work upon the wax model of a saguaro or giant cactus (*Cereus giganteus*) in the Museum.

The earliest cylindrical cacti to bloom in the vicinity of Tucson is *Echinocereus fendleri*, the blossoms of which are brilliant maroon-red. One specimen of this group secured by the party bore twenty-three flowers, each about three inches across.

The glories of the matchless western sun-sets seem to have been caught and held by the flowers of this land. One feels that every color and tone is present, so varied is the display. Difficult, indeed, is the task of the artisan who would reproduce them in wax.

In selecting material for the museum group, casts were made of most of the plants common in the Arizona desert; a few of them are of especial interest and will bear mention here. One of these is *Penstemon wrightii*, with its crimson, tubular flowers, a succession of which follow through March and April. Another, is *Penstemon parryi*, a plant of the slopes, with blossoms of a metallic luster. The stalks of these plants are a favorite food of rock-squirrels,

which cut them off near the base and carry them away to their retreats.

The party photographed a very beautiful plant of the desert verbena (*Verbena ciliata*), growing near the tents. This plant with its masses of deep pink blossoms, a brilliant example of Nature's art, was two feet in diameter.

The most striking color note of the spring here, is the golden glow on the slopes of great clusters of *Encelia farmosa*. The blossoms of this sturdy plant are similar to those of our eastern aster, and they grow in clusters which often are nearly a yard in diameter. So dense are these flowers that they give to the slopes a golden color which may be caught by the unaided eye for seven or eight miles.

In the desert the grasses, too, play a part in the brilliant color scheme. Conspicuous among these is *Hilaria mutica* a true desert grass which finds a place high up on the slopes, where it makes patches of color visible for miles.

The plantains which are



The largest giant cactus seen by the party. This specimen was forty feet high with four vertical arms and six woodpecker holes.

such an eyesore in our trim eastern lawns are of greatest economic importance throughout this desert region, being the chief forage plants of cattle and goats during the spring. Two species abound—*Plantago aristata*, which confines itself to the slopes, and *Plantago ignota*, which spreads over vast areas of sandy mesa giving to the lowlands the silvery grayish tone which is so pleasing.

Because of the scarcity of time, only such work as was absolutely necessary was done while the expedition was encamped. The actual casting of the objects in wax was done at the museum after the party's return. Work on the group is going on steadily, and it is expected that in the near future there will on exhibition in the Brooklyn Museum a replica of a portion of the Arizona desert which will banish forever, the idea of sage brush and sand as the maximum of vegetative possibility of the desert.

Mary B. Morris.



SCENE FROM THE APOCALYPSE, THE ONLY FOURTEENTH CENTURY TAPESTRY SET IN THE WORLD

THE ROMANTIC INTEREST OF TAPESTRIES

TO me tapestries are the most fascinating form of art. They have not only the texture interest of damasks and brocades, Oriental rugs and embroideries, but also the picture interest of photographs and paintings and the story interest of novels and romances.

In tapestries were made vivid to the ancient Greeks the stories of the Iliad and the Odyssey; to the ancient Romans the stories of the Æneid and the Metamorphoses; to Europeans of the fourteenth, fifteenth, sixteenth, and seventeenth centuries, not only the classic stories, but also those of the Bible and the saints, and of mediaeval history and romance.

Of ancient Greek and Roman elaborate picture tapestries, none have survived; of European picture tapestries earlier than the fifteenth century, only a few. Indeed, there is in existence only one fourteenth century set of tapestries, the famous and wonderful series picturing the Apocalypse in the French Cathedral of Angers. Originally the set consisted of seven large tapestries, eighteen feet high with a combined width of 472 feet, in a double row of scenes one above the other—ninety scenes in all, of which seventy survive, one of which is illustrated in connection with this article.

The passage of the Apocalypse or Book of Revelation, pictured by the scene illustrated, is chapter VI, verses 5 and 6:

"And when he had opened the third seal, I heard the third beast say, Come and see. And I beheld, and, lo a black horse; and he that sat on him had a pair of balances in his hand.

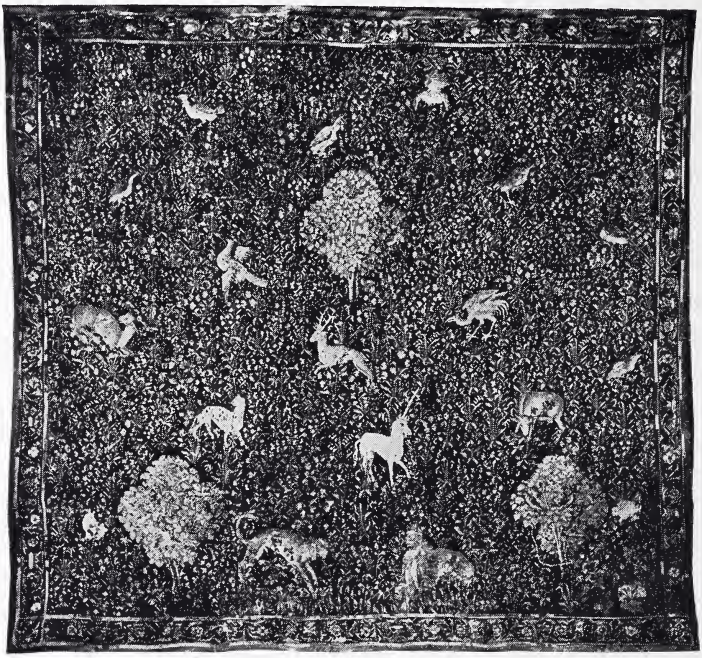
"And I heard a voice in the midst of the four beasts say, A measure of wheat for a penny, and three measures of



THE CREATION, A LATE GOTHIC TAPESTRY FROM THE FAMOUS BERWICK AND ALBA COLLECTION

barley for a penny; and see thou hurt not the oil and the wine."

I must confess that my knowledge of the Book of Revelation has been increased more than a hundredfold by my study of this fourteenth century set of Apocalypse tapestries. They have interpreted and made real for me what was remotely symbolic before. And what is true in this



Gothic mille fleur belonging to Mr. C. Ledyard Blair.

respect of the Book of Revelation, is also true of most of the other books of the Bible, and of some of the books of the Apocrypha.

The designs of these Apocalypse tapestries were copied from an illustrated manuscript of the Book of Revelation borrowed by the Duke of Anjou from his royal brother Charles V, who was King of France from 1364 to 1380. But like some modern borrowers, the Duke does not appear to have taken the trouble to return the book. It is now in the Public Library of the French city of Cambrai. The



THE SACRIFICE AT LYSTRA, A RAPHAEL TAPESTRY IN THE ROYAL SPANISH COLLECTION

maker of the full-size colored cartoons from which the tapestries were woven, was the King's court painter, Hennequin de Bruges, also borrowed for the purpose. The man who wove the tapestries was Nicolas Bataille of Paris, who was paid what would perhaps be the equivalent of sixty thousand



Scipio's Attack on Cartagena, in the Cincinnati Museum.

dollars in our money. Some of the ninety scenes contained more than twenty-five personages.

As generations pass, styles change, sometimes for the better, sometimes for the worse. When tapestries went out of fashion at the end of the eighteenth century, the Canons of the Cathedral of Angers decided to sell the Apocalypse tapestry which had been presented to the Cathedral in 1480 by King René. But no purchaser could

be found. So against their will they were obliged to retain their greatest treasure.

Not believing that anything Gothic could be beautiful, they decided to make the Apocalypse tapestries useful. They employed them in the greenhouses to protect the orange trees from the frost. They cut them up into small rugs for the chambers of the Bishop's Palace. They even nailed them in strips on the stalls of the Bishop's Stable to prevent his horses from bruising themselves.

Finally in 1843, a sale was effected. These priceless examples of the art of the fourteenth century were auctioned off for three hundred francs—sixty dollars. Fortunately the purchaser was wiser than the administration, and restored them to the Cathedral of which they are now once again the chief glory.

By the beginning of the fifteenth century, the art of weaving storied picture-hangings had reached a high point of perfection. Kings and great nobles vied with one another in the ownership of magnificent sets rich with gold, and when they wished to make presents, could find none more splendid to give, nor more welcomely received, than Arras tapestries, so called because the French-Flemish city of Arras was the chief centre of manufacture during the fourteenth century, and the half century before and after.

The beginning of the sixteenth century marked the zenith of tapestry weaving. During the twenty-five years before and after 1510, tapestries were made in immense numbers, from designs superior in color, composition, and story interest, by weavers whose skill stands unapproached, for patrons whose connoisseurship was the wisest. In other words, this was the Golden Age of Tapestry, whose masterpieces are the admiration and despair of the designers and weavers of to-day.

Take for instance the late Gothic *Creation*, now at the Château de Haar in Belgium, illustrated on another page. It is 13 by 27 feet, and is one of a set of six picturing the *Story of Man*, acquired by the late Baron d'Erlanger from

the famous Berwick and Alba collection, and by him exhibited at the Belgian Tapestry Exposition of 1880. The weave is wonderful, the story interest of the seven scenes picturing the seven days of creation is extreme, the modeling of faces and hands is exquisite, the richness of the robes is extraordinary, while the verdure grounds and backgrounds, the narrow-leaf-and-flower border, and the animals introduced boldly but subordinately into the foreground, are vivid with life and reality. No wonder that Burne-Jones and the other Pre-Raphaelites lost head and heart to the work of artists and artisans of this period.

Quaintly original from the theological point of view is this tapestry of the *Creation*. In each of the seven scenes, the Trinity is represented not as aged Father, youthful Son, and Holy Ghost in the form of a dove, but as three kings all garbed, crowned, sceptred, and bearded alike, and all beautiful of face and graceful of form, with no outward mark or sign of any kind to distinguish one from the others. The middle scene is particularly impressive—the Trinity seated in Majesty on a richly carved Gothic bench, each person with the Imperial Globe in his lap (and one with sceptre) backgrounded by the celestial choir, the angel of justice with sword on one side, the angel of mercy with lily, on the other.

The three great periods of tapestry weaving are Gothic, Renaissance, Baroque; the Rococo and the Classic of the eighteenth century adding numerous but comparatively small and unimportant pieces with the exception of those woven at Beauvais after the design of Oudry and Boucher, and the Don Quixote series after Charles Coypel at the Gobelins. Most Gothic tapestries now in existence were woven between 1400 and 1525; most Renaissance tapestries between 1515 and 1620; most Baroque tapestries between 1600 and 1710. In other words, roughly speaking, Gothic tapestries are of the fifteenth century, Renaissance tapestries of the sixteenth century, Baroque tapestries of the seventeenth century, with Gothic lingering well into the



THE DEFEAT OF ANTONY AND CLEOPATRA BY AUGUSTUS AT ACTIUM, A BAROQUE TAPESTRY IN THE METROPOLITAN MUSUEM

sixteenth, Renaissance well into the seventeenth, and Baroque well into the eighteenth.

To the full bloom of the Renaissance belongs the *Sacrifice at Lystra* of the Royal Spanish Collection, illustrated on another page. This is part of a set reproducing nine of the ten Acts of the Apostles tapestries that were designed by Raphael for Pope Leo X, and woven in Brussels by Pieter Van Aelst (1515-1519.) The Spanish reproductions were also woven in Brussels, and are signed in the right selvage, two with the monogram of one Brussels maker, seven with the monogram of another Brussels maker, but none with the Brussels mark. The Spanish set is in every respect equal—in richness of materials—gold, silver and silk—and excellence of texture, to the original Vatican set, and in some respects superior, particularly as regards the borders.

The story interest of the *Sacrifice at Lystra* is great. The scene is the one described in the New Testament, chapter fourteen of the Acts of the Apostles. The apostles Paul and Barnabas preached the gospel in the city of Lystra and other parts of Lycaonia. And in Lystra sat a certain man impotent in his feet, who had never walked. The same heard Paul speak, who steadfastly beholding him, and perceiving that he had faith to be healed, said with a loud voice:"Stand upright on thy feet." And he leaped and walked. And when the people saw what Paul had done, they lifted up their voices saying in the speech of Lycaonia: "The Gods are come down to us in the likeness of men." Then the priest of the temple of Jupiter which was before the city, brought oxen and garlands into the gates, and with the people would have worshipped and sacrificed victims to Barnabas and to Paul, calling the former Jupiter, and the latter Mercury because he was the chief speaker. And with difficulty and after much exhortation did Paul and Barnabas restrain them.

In style of design, the *Sacrifice at Lystra* is not only typically Renaissance, it is typically Italian Renaissance, with none of the modifications introduced by Flemish car-



THE KING VISITING THE GOBELINS, A LOUIS XIV GOBELIN IN THE FRENCH NATIONAL COLLECTION

toonists and weavers, even into tapestries based on the designs of Italian or Italianised painters. Very different is this from the Baroque *Cleopatra* tapestry which is our next illustration. In the Renaissance period, ornament, especially in designs influenced by Flemish artists and weavers, was comparatively flat. But as the sixteenth century grew old, everything began to be regarded from the sculpture point of view, and shadows and high lights to be over-accentuated in order to exaggerate the "in-the-round" appearance. Hence the bulbous women and horses of Rubens, and his architectural borders for tapestries in simulated high relief, and the general tendency to substitute cubic for flat effects, and shadow contrasts for line contrasts.

The subject of the *Cleopatra* tapestry—one of a set of five in the Coles collection at the Metropolitan Museum—is told in the Latin caption in the cartouche at the middle of the top border, ANTONIUS. APERTO. NAVALI.

PRAELIO. A. ROMANIS. DEBELLATUR. ET. FUGIT. (Antony, engaging in a naval battle, is beaten by the Romans and flees), the battle referred to being of course the famous one at Actium in B. C. 31, where Augustus, later the first Roman Emperor, with two hundred and fifty ships defeated the superior fleet of Antony and Cleopatra, the latter fleeing before the battle was decided. The tapestry is signed in the bottom selvage with the Brussels mark, a shield between two B's, and IAN. VAN. LEEFDAEL, who was a well known maker of the middle of the seventeenth century.

Our next illustration shows one of the finest Gobelin tapestries ever woven, a typical Louis XIV Gobelin in the French National Collection designed by Charles Lebrun and woven in the State Gobelin Factory established in 1667 by the union of the Early Gobelin factory founded in 1601 with the other tapestry factories active in and near Paris. The subject of the tapestry before us is the *Visit of Louis XIV to the Gobelins* as told by the French inscription in the

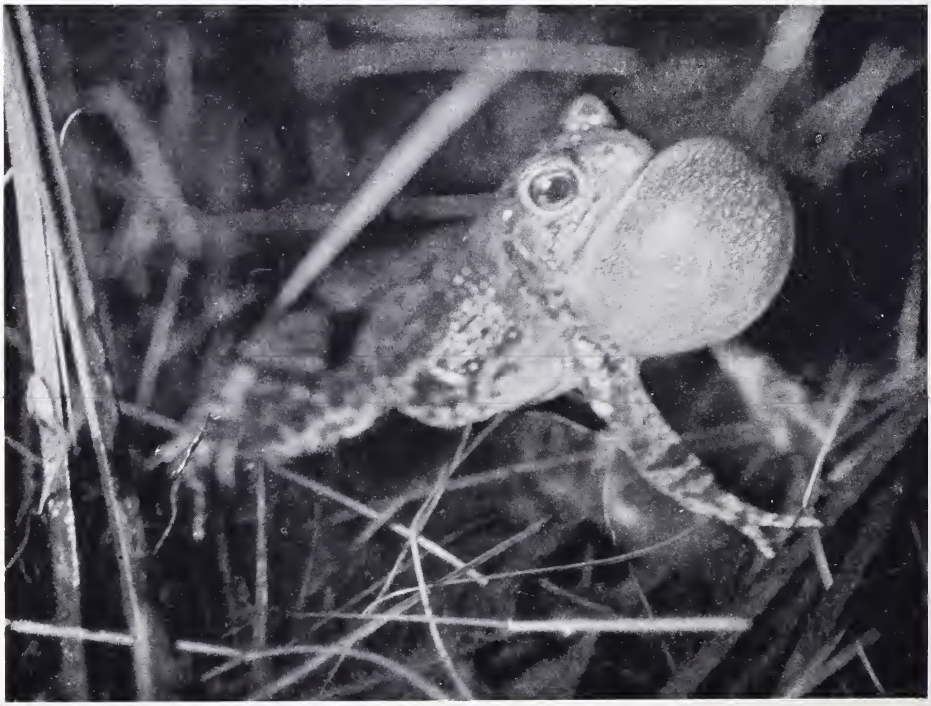
cartouche at the middle of the bottom border that reads translated: "The King Louis XIV visiting the factory of the Gobelins where Sieur Colbert superintendent of his buildings conducts him to all the shops in order to show him the different kinds of work being done." The King, on the extreme left, placed on a platform to exalt his stature, is turning to speak to Colbert. The framed painting on the wall is one of Lebrun's designs for the *Story of Alexander* series of tapestries. The two tapissiers on the extreme right are probably Lefèvre and Jans. Judging by the confusion, the King arrived before he was expected.

It will be noticed that this tapestry, though woven later, is far less Baroque and shows much more the inspiration of the Renaissance, than the *Battle of Actium* described above. It is one of the famous *Story of the King* series in fourteen tapestries picturing noteworthy events of the life of Louis XIV. Since the period of Louis XIV, few tapestries have been woven that deserve to be called great. Only now is the effort being made seriously and intelligently to revive the glorious traditions of the Golden Age.

George Leland Hunter.



Where wood frogs breed, Patchogue, L. I., March, 1913.



Flashlight photograph of a common toad whistling.

THE FROGS AND TOADS OF LONG ISLAND

MOST persons are acquainted with frogs and toads principally through their songs. The first frog voice to break the winter's silence on Long Island is that of the spring peeper, *Hyla pickeringi*. This animal is a tiny tree frog, scarcely more than an inch in length, with climbing pads on the ends of its toes. Its color is some shade of brown, and the little fellow sitting in a small tussock of marsh grass, looks like a miniature negro baby ready for a swim. Its voice is a shrill peep or whistle, repeated at intervals of about a second. When it is about to sing, it inflates its lungs with air, and distends its throat into a sac as large as its head. It sings with a closed mouth, and distends the throat sac to a greater size at each peep. This method of producing sound is typical of the method by which all frogs and toads make their characteristic noises.

Spring peepers begin to sing on Long Island about March 15th, or on the first warm days of spring. Their chorus is heard in nearly every marsh all through April. Their sounds are less frequently heard after the first of May, and their places are taken by the harsh, prolonged whistles of common toads, and a little later, by the bass viol notes of green frogs. The succession of shrill peeps, followed by harsh whistles, and then by bass notes, has given rise to the popular belief that the sounds are all produced by one kind of frog which begins to sing with a peep while it is still small, and develops a louder and lower voice as it grows older, until by summer time it has become a big frog with a bass voice. But the truth is, that every frog and toad sound is made by a fully grown, adult, male animal that is calling for a mate. The chorus of sounds is made only during the breeding season, although a call may occasionally be heard at any time during the summer.

All Long Island frogs and toads hibernate during the winter, and almost their first act on emerging from their winter retreats is to resort to pools of water in order to lay their eggs. Common toads also resort to the water, and during the breeding season they are as expert swimmers and divers as any of the frogs. The succession of sounds indicates the times of awakening of the various species. Each species has its own peculiar call which is as distinctive as the call of a robin, or of a crow. Any person can readily learn to distinguish the songs of all the frogs and toads of Long Island by listening to their chorus in the marshes.



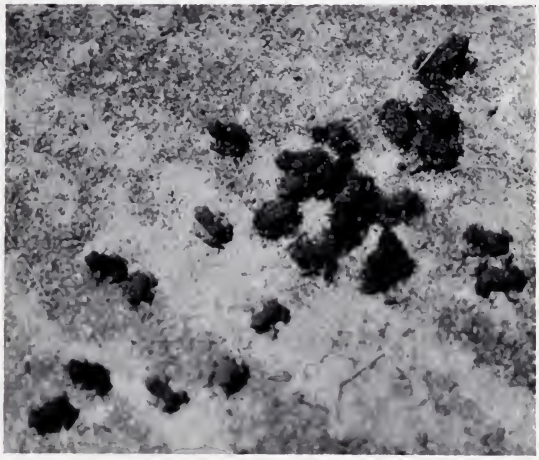
An elf of the woods; a spring peeper singing. Flashlight.

No one passing a swamp or marsh on a warm spring evening can escape hearing the frog and toad chorus, but to see the performers requires a little time and patience. The animals have keen eyes, and are extremely suspicious in the day time, but a strong light at night dazzles their eyes, and prevents them from seeing the person behind the light. They do not fear a steady light which gradually approaches them, and they do not take alarm even when a photographic flashlight is set off close to their faces. They do not mind the sound of low talking, but they are sensitive to vi-



A mass of wood frog eggs, about natural size.

brations transmitted through the ground or water. A sure method of seeing them in the act of singing is to go into the marsh carrying a strong bicycle lamp, and slowly approach the source of an individual sound, taking care not to produce vibrations of the water or ground in stepping. If an individual persists in singing, it will readily reveal its position to the observer.



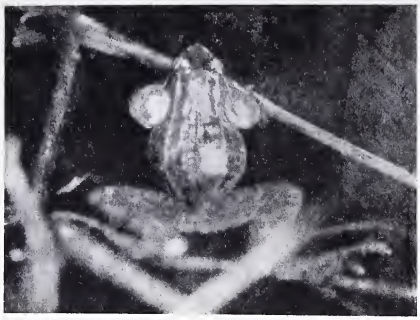
Young common toads on a roadway. Many country people insist that these tiny creatures rain down from the clouds.

The eggs of all frogs and toads produce what are called *tadpoles*. The word tadpole is derived from the words tad, toad, and poll, head, for the creatures seem to consist of heads and tails with no bodies. Tadpoles live under water, but after a time their tails are absorbed into their bodies, and they acquire legs and take on the forms of their parents. But they continue to grow for several years after they have taken their adult forms.

At least nine species of frogs and toads are universally distributed over Long Island, and frequently five of them may be heard singing in a single pool during a warm evening in May. The first sound that is usually heard after the spring peeper has appeared, is a croaking in an extremely low pitch. The sound may be imitated by pronouncing the word croak very slowly as if it were spelled ker-r-r-o-o-a-k, pitching the



A tree toad trilling its song.




Flashlights of leopard frogs croaking. In this species the vocal sacs are double and lateral.

voice in as low a bass as possible. This sound is made by the leopard frog, *Rana pipiens*. The frog swells out a sac over each shoulder while it croaks. It may be distinguished by the dark spots on its back, together with the pure white of all its under parts. It is especially common on salt marshes, and is abundant on the Great South Beach.

An extremely warm day during the last of March will usually bring out the wood frogs. These frogs will suddenly appear in woodland pools swimming on the surface, and fighting among themselves. The note of a wood frog is like the clucking of a teamster urging on his horses. It is explosive in character, and low in pitch. A chorus of the frogs sounds like the cluckings, not the quackings, of a flock of barn-yard ducks at feeding time. The frogs deposit their eggs and go back to the woods within a very few days.

Common toads usually appear about the first of April. Their songs are low-pitched, harsh whistles, each lasting about two seconds. A song heard close by sounds like a combination of a groan and a whistle. The common toad of Long Island bears the scientific name *Bufo fowleri*, while the common toad of the main land belongs to the species *Bufo americanus*. The song of the species *americanus* is gentle and sweet in quality, and each sound is prolonged for about thirty seconds.

The tadpoles of common toads acquire their adult forms

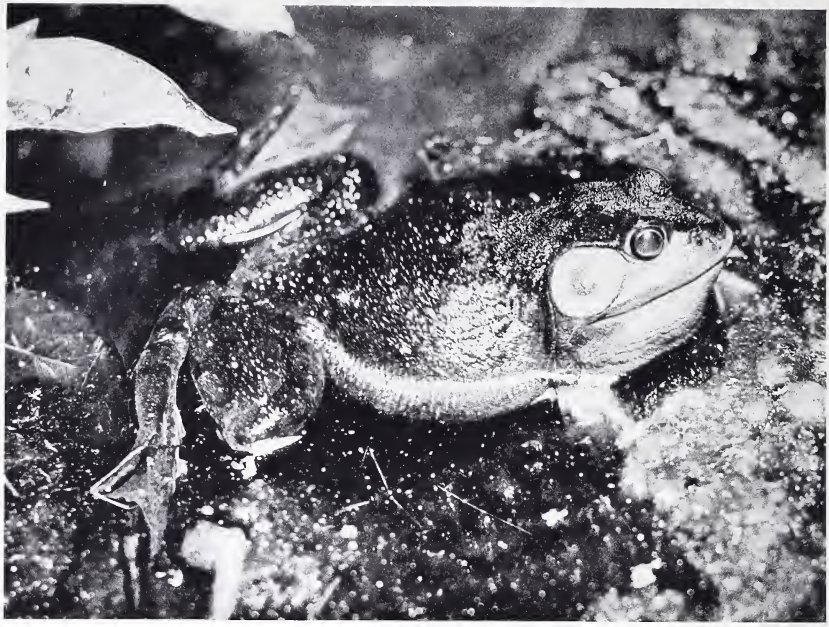
and leave the water about the Fourth of July. The young toads are from a quarter to a half inch in length. They are extremely sensitive to dryness, and will die and shrivel up if they are left in a box for a few hours. They usually lie hidden in damp places, but a shower of rain will bring them swarming over roads and paths near marshes. They frequently appear in vast numbers, and give rise to the popular idea that they rain down from the sky.

A toad that is widely distributed, but is seldom seen and studied, is the spadefoot toad, *Scaphiopus holbrooki*. This toad suddenly appears in pools after a hard rain early in April, quickly lays its eggs, and disappears, like the wood frog. It is an extremely noisy animal while it is in the water, and its call is like the squawking of a rooster caught in the middle of the night. The animal is a burrowing toad, and is nocturnal in its habits. It is more abundant than is usually supposed.

The spadefoot toad sings while sprawled upon the surface



A Long Island spadefoot toad.



A bull frog bellowing. The vibrations of the body cause tiny waves in the water. Flashlight.

of the water. It distends its throat in an enormous white pouch which bobs its head up while its hinder parts sink down. At the end of the song, the head bobs down, and the hind legs bob up again.

The common tree toad, *Hyla versicolor*, appears in its breeding pools at irregular times in May and early June. Its call is the familiar trilling note that is frequently heard in the summer time just before a rain. It swells out its throat in an enormous pouch while it gives its call. It also has a note like the chirping call of a hen turkey. The turkey call is not given frequently, and a whole summer may pass by without the sound being heard. Few persons have heard the call, and still fewer understand its origin. Colored folk living near a swamp are terror stricken when they hear it, for they call it a "turkey root," and ascribe to it the same magic powers that they do to roots and other forms of black magic.

A low, snoring sound coming from the banks of a pond

is made by the pickerel frog, *Rana palustris*. This frog is spotted, but may be distinguished from the leopard frog by the yellow color of its hinder parts underneath. This frog swells out its cheeks while it sings.

The frog that is the most frequently seen along the banks of ponds is the green frog, *Rana clamitans*. Its song is an explosive note resembling that made by plucking the string of a bass violin. It swells out its throat and cheeks during its song.

The bull frog, *Rana catesbiana*, was formerly common all over Long Island, but it is now confined to Wading River and a few other localities. What are popularly called bull frogs are large green frogs. A bull frog is an enormous creature, for a frog, and its voice is like the bellowing of a bull. It has less sense than its smaller cousins, and it therefore easily falls a prey to hunters. Its complete extermination is only a matter of time, unless the raising of the frogs for market becomes an established industry.



A green frog tuning his bass viol among the lily pads. Flashlight.

It is probable that other species of frogs and toads, besides the nine that have just been described, will be found on Long Island. Probably no other section of the country combines such varied conditions as Long Island with its growths of primeval forest, its plains, its numerous streams and swamps, its wide stretches of salt marshes, its quiet bays and estuaries, and its boundless ocean. The forms of living things that are found on the Island are as varied and as abundant as the natural conditions themselves. The devastations and the so-called improvements, instituted by man himself, are the chief factors in limiting the variety and abundance of Long Island's living things.

FRANK OVERTON, A. M., M. D.



Photo by Arthur Nichol.

A YOUNG GOAT AT CLOSE RANGE

HUNTING IN BRITISH COLUMBIA

PROBABLY nowhere on this continent is the scenery more beautiful than in the mountains of British Columbia. To one who is fond of nature, the call of the mountain wild is strong. In spring and autumn the distant call is felt instinctively, and when one yields to this allurement it is with a keen anticipation of invigorating days to come.

Our trip out had much of interest in it. Starting the last of September, two days were passed in crossing the prairies. The farmers had harvested their wheat, and in some sections the six-horse plow was turning over the ground for the next crop. In the late afternoon, as the train sped on, we could see the wonderful color effects which only a setting sun on a rolling plain can give. Purples, browns and greens predominated, and as the sun sank in the west all colors turned to a brownish hue, until night finally blotted out the scene.

Arriving at our destination we fill our duffle bags with the necessary equipment for our hunting trip, load the pack horses, mount our own steeds, and are off, full of enthusiasm for the wilds. We have nine pack horses carrying a hundred and fifty pounds each of cooking utensils, food, sleeping bags and tents. Certain of the broncos, which are not expert at packing, are selected for the cook's pots and pans, but only horses which have packed for years are given the responsibility of carrying the cameras. A young animal will bump his pack into trees, but the old stager gives obstructions a wide berth.

There are seven of us, A. P. Proctor (the sculptor), two guides, two helpers, a cook and the writer—a congenial lot, all fond of nature and keen on the hunt.

Our first and main camp is made in a beautiful valley



The main camp.

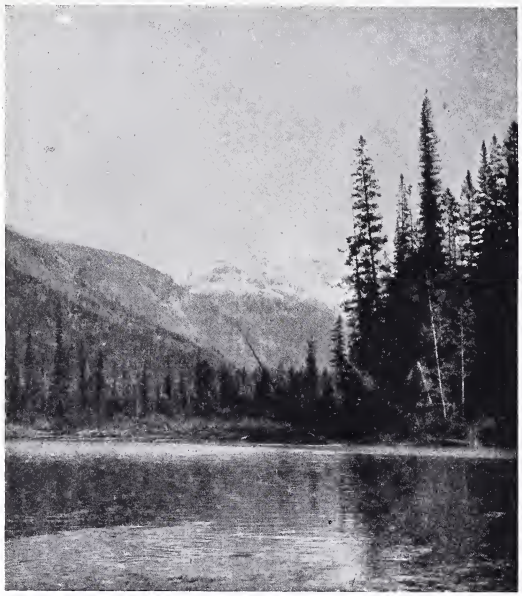
by a rushing river whose steady tumult lulls us to sleep after a hard day's tramp. The tents of this camp are tepees, the style of which has been copied from the Indians. For comfort there is no tent just their equal. The fire is built on the ground inside, the smoke going up through the opening left at the top. No matter how cold it is outside, we are kept perfectly warm inside our dwelling.

From here we make side camps well up in the mountains



Our first and main camp is made in a beautiful valley by a rushing river whose tumult lulls us to sleep after a hard day's tramp.

but near enough to send back for additional food when our supply runs short. The mountains are always full of interest, ever changing—sometimes bare rock, then covered with snow. Clouds, too, make the scene an ever-varying one. At times the summits are completely covered and then again simply a veil of clouds hangs over them. These changes of effects, varying with the time of day, add to the charm of a trip in the mountains.



One of the numerous fords.

But we are here to hunt game, as well as to admire the scenery, for the Biological Survey at Washington has requested us to bring home some specimens of the mountain sheep *Ovis canadensis* for the National Museum.

From the main camp we tramp for two hours up a side canyon, with a rushing stream at its bottom, over rocks and windfalls until we reach the spot where our side camp is to be located. In a quiet spot among towering pines, well protected from the winds which are sure to blow, we pitch our lean-to tents and make ourselves comfortable. The following day we climb the east slope of the canyon and when half-way up, spy a band of six or eight ewes feeding quietly.

As we have brought a moving-picture camera with us to the side camp, and think that these sheep will make a good subject, the guide goes back for the machine, while we climb across fallen logs in an endeavor to get above



Photo by Arthur Nichol.

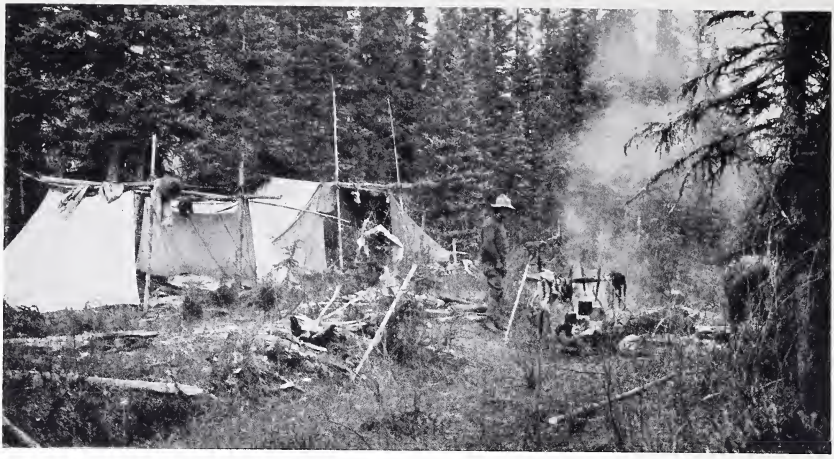
Mountain goat are the best rock-climbers on this continent.

the game. As we reach the top of the timber, the guide comes up panting with the camera, having gone to camp and back again in the time it has taken us to climb the quarter of a mile of slope.

We arrange the camera to take the moving picture, but search as we will no subject can we find, and we come to the conclusion that the sheep have either heard or scented us. We search further on the mountain for them but they are nowhere to be found and we return to camp.



Fording a stream on the way toward the upper camp.



The up-river camp from which we hunted for goat.

The next day we try the summit to the westward. After a two hours' steady climb we reach the summit and spy cautiously over on the other side, being careful to show as little of ourselves as possible. Luck seems to be with us, for about three hundred yards away on a shoulder of the mountain we see four rams. They move toward us but are finally hidden from view by a jut in the summit. Dropping back, we retrace our steps part-way and making a long detour reach a point farther on, above and to the rear of where we had last seen them. Looking down the slope we spy the rams again, but they are a long way off. By working our way, first on our stomachs and then on our sides and backs, keeping behind a small knoll, we get within seventy-five yards of our prey.

The first ram looks a monster as he stands facing the light, his horns magnified by the shadow. We fire, but the bullets do not seem to take effect, for he stands there seeming to wonder where the noise comes from. Only ten minutes later, after he has fallen, do we find that the shots have gone entirely through him without striking any large bones, thus allowing him to stand apparently unhurt.

The second ram, hit by a bullet, runs down the mountain

side and we after him. As we reach the shoulder below we see him standing on a single rock like a statue on a pedestal, making a picture which will not soon be forgotten. A second shot is fired and he rolls into the canyon.

Measurements must be taken, for the Biological Survey has asked that we send in a complete record, so back we go to our first ram and tape him from head to tail, shoulder to heel, and in other dimensions, so that when he is mounted he will look as natural as life. The same process is carried out with number two, and then we wend our way to camp, tired but very well pleased with the day's sport.

Every day has some new interest in store for us. The summits are always beautiful, and when game is not seen we have the wonderful snow peaks to watch and photograph. Two days after shooting the rams we have a most interesting experience. Climbing a snow-covered summit we see two small rams lying on the slope below us. Here is a good subject for the moving picture camera, and we move cautiously as we creep down nearer to them, keeping all the time behind a shoulder of the ridge so that we will not be seen. The ground is slippery after the hard frost of the previous night and the thaw of the morning



A snow-capped peak at the head of the river.



Bringing in a specimen for the Biological Survey.

sun, so that extra precaution must be used lest one slip or start a rock rolling. We have seen the sheep on the left side of the ridge as we start our descent, but they have moved around to the right side when we peer over a clump of juniper bushes in our attempt to find them.

We have attached the telephoto lens to the camera, for seventy-five yards is too long a distance for the lens of shorter focus. Below us stand the rams looking up at us. We start grinding, expecting every minute to see them jump and run from fright, but they stand there as though anchored and make no attempt to move. This pose is too much like time photography, and we call to them to please move on and show some animation. But no; likely they have never seen man before and are fascinated by the murmuring sound of the camera. We throw stones at them but that does not disturb them. Finally the guide, who has climbed above us for the tripods, sees our difficulty and hurls a large rock at them. This is too much for the rams and they wheel and run over a shoulder of rock. The running is what we want, and we turn the crank of our camera more rapidly in an endeavor to photograph them in action. The day has been cloudy with

poor light for moving pictures, but we hope for good results and thank our lucky stars for having given us the opportunity to make the trial, at least.

On our way back to camp we follow a game trail and after having gone about half a mile, spy a large blacktail buck feeding not more than seventy yards away. We fire and down him, and as we never have shot as good a specimen before, are more than pleased with the day's results.

Such luck cannot continue, and then too, we want to see what luck Mr. Proctor has had from his side camp, for he started the same day but in another direction. We return to the main camp to learn that Mr. Proctor has seen no sheep, and that the goat which he has shot has unfortunately fallen over a sheer cliff and been dashed to pieces.

Exchange of guides every week is the rule of camp, so we take his Indian and he our Scotchman. For the next week snow and rain, with few bright days is the weather order, but during that time we go up river and shoot a goat which has been frightened by a band of ewes.

Three days after we make a side camp up river and hunt for goat. The following day, after climbing for three hours over fallen trees, we ascend a dry creek to the snow-covered summit. Here is written in footprints the story of a band of ewes which has come from the further canyon over into the one which we have just left. They have not been disturbed or frightened, for their tracks are separated; if they came in single file, we should know they were running to safety. We look back and up the canyon but see no trace of them; probably they have hidden themselves behind a rocky bluff, of which there are many, or in the timber which grows in patches on the slope.

The snow is deep as we cross the summit and we sink up to our knees as we start the descent. Looking far below us the Indian discovers a "billy" lying white under

a tree. It is hard to distinguish him, surrounded as he is by snow, but our powerful field glasses show him to be a large one. It is a three-hundred yard shot, but we take the risk of missing him, knowing that on account of the rough country below us we cannot make a good stalk. We fire, and he moves slowly away over the mountain's edge and is lost to view. Our risk in taking a long shot we feel has ended in failure, but, after a trying and hazardous descent over slippery rocks where a misstep would hurl one a hundred feet below, we find blood, and know that the goat has been hit. It is too late in the day to track him and we return to camp, having been out more than eleven hours, nine of which we have spent in tramping, but the next day the Indian guide, who is a five mile runner, tracks the goat to where he finally has fallen. On measuring him we find him to be forty-five inches high at the shoulders, a huge animal, with long hair and a fine head.



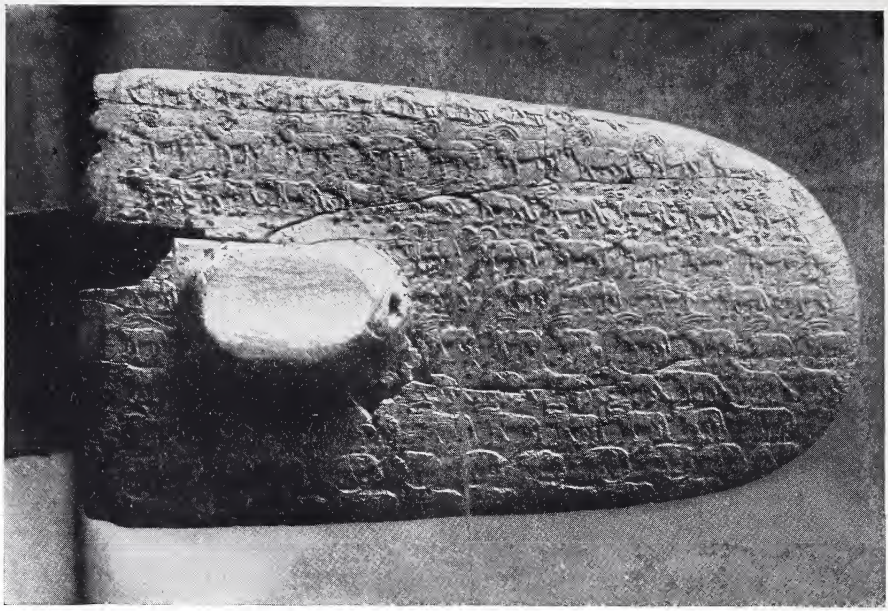
Mr. Proctor, in the meantime, has shot his two rams, one for the Government and one for himself, and is easy in his mind. All of us are happier for his luck, for there is always a feeling of something unaccomplished when all of the party do not secure their full quota.

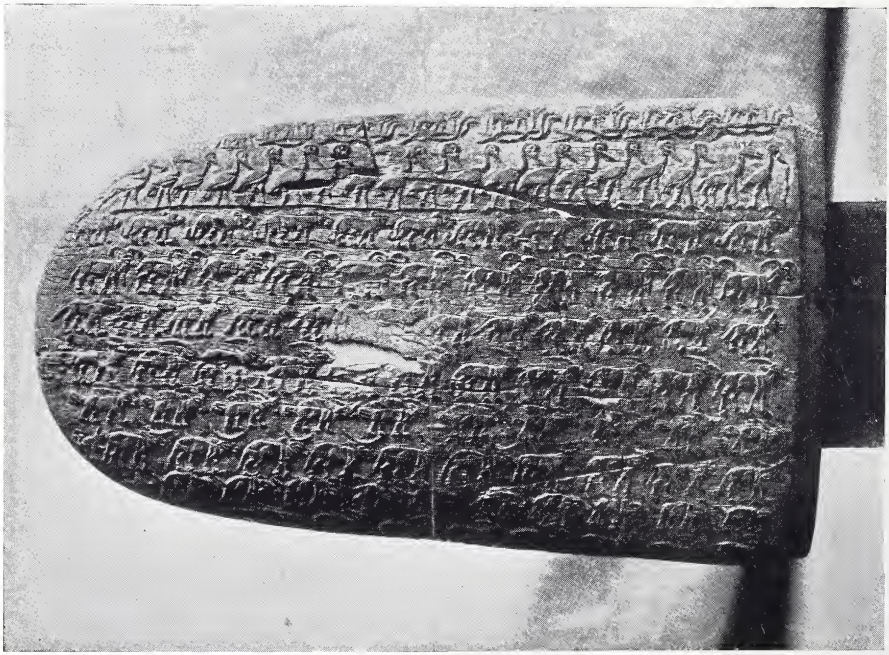
A few days later all of us move still farther up river and spend the last days of our trip in a country where probably no white man has ever set foot. A towering and impressive snow-capped mountain rises six thousand feet out of the valley in front of camp, while behind us a

thousand feet of sheer rock wall defies the ambition of one who would scale it.

Then after a day at the main camp, spent in straightening our duffle, we turn our broncos' heads trainward. Our trip is over but the memory of it will stay with us for years to come.

GEORGE D. PRATT.





IVORY HANDLE OF FLINT KNIFE

This handle is covered with delicate low relief ornamentation representing some two hundred animals in ten lines on each side. It was excavated for the Museum in 1908 by Mr. Henry de Morgan and found in a tomb at Abou-Zedan (district of Esneh). The tomb belonged to the First Prehistoric Period, "of contracted burial," earlier than 5000 B. C. This is the most important piece, so far known, of the given character and only one other is comparable, the so-called Pitt-Rivers ivory knife handle, in the Pitt-Rivers Collection at Oxford.

THE PREHISTORIC EGYPTIAN COLLECTION OF THE BROOKLYN MUSEUM

IT is seldom that any branch of study has had so strictly logical and sequent an evolution as Egyptology. Wholly undeveloped, even in its incipient stages, before the Egyptian campaign of Bonaparte in 1798, this study began with the colossal publication which Bonaparte conceived, and which was carried out by the men of science whom he had selected for this purpose. It was inevitable that this first publication should be mainly devoted to the visible architectural monuments. No later work has rivalled it in the fidelity and number of its fine engraving of the temple ruins. Some, which have since disappeared, are even preserved to memory by its pages. But this publication has one great deficiency. In the days when hieroglyphics could not be translated they could not, consequently, be always accurately copied. As the walls of the Egyptian temples are universally covered by monumental inscriptions this was a serious defect.

It was not until 1824 that Champollion made his immortal publication on this subject. He had not only deciphered the Egyptian characters; and in this matter some tentative steps had been taken by his predecessors; but his still greater contribution to hieroglyphic study was the discovery of the nature of the language to which the characters belonged. Otherwise the deciphering of the characters would have been of little value. Champollion's intuition that the Coptic language was derived from the ancient Egyptian, and the key to its study, was essential to the translation of Egyptian hieroglyphics.

The next great step was taken by Rosellini. Our knowledge of the details of old Egyptian life is still mainly derived from the tomb paintings. These were first published

by this scholar between 1832 and 1844. The title, at least, of Wilkinson's "Manners and Customs of the Ancient Egyptians" is known to most of us, but this great work would have been impossible without the folios of Rosellini.

The tomb paintings known to this stage of Egyptology were, however, almost wholly those of the tombs, excavated in the sides of the mountain ranges which border on the Egyptian valley, of which the Tombs of the Kings at Thebes and the tombs at Beni Hassan are the most obvious examples. But these were not the types of tomb which were usual in the days of the pyramids. Aside from the pyramids themselves, the remains of the entire period to which they belonged were unknown to the first half of the XIXth Century. It was the great Prussian expedition of Lepsius (1845-47) which first excavated, surveyed, and published (after 1851) the mastaba (or bench-shaped) tombs of the Old Empire and especially those of the IVth and Vth Dynasties, as found in the field of the great pyramids or at Sakkâra.

It is now an elementary principle of Egyptian history that the art and civilization of the Pyramid period had a perfection which was never subsequently again attained, but even after the explorations of Lepsius it was long before this fact was properly appreciated. Its demonstration is offered largely and most emphatically by sculpture and the statues which were buried in the mastabas were unknown to Lepsius, because he was not aware of the existence of the walled-up recesses connected with the mastabas in which these statues were placed. It was reserved for Mariette to discover these walled-up recesses in 1858 and to find, after that date, most of the statues of the given class which are now known and which are mainly in the Cairo Museum. Let us now consider that the "wooden man of Boulak" (so-called Shêkh el-Beled); one of the first of this class to be discovered; was unknown in Europe until it was shown, with some others of its type, at the Paris

Exposition of 1867, and it will begin to appear that the most elementary propositions of present-day Egyptology were very recent discoveries in the early seventies.

It is, however, in these early seventies that the great names of Henry Brugsch (1827-1894) and of Gaston Maspero (born 1846) begin to assume something of their present proportions in the field of Egyptian archæology, Egyptian history and Egyptian hieroglyphic translation. But the study of the earlier dynasties had not as yet been attacked. Remains of the Ist and IInd Dynasties were still unknown and as recently as the year 1895 there still was a total lack of material for these first two dynasties. To quote the words of M. J. de Morgan written in 1896, when he was Director General of Antiquities in Egypt: "There was "not in the Gizeh Museum, or in European collections, "a single object which could certainly be ascribed to the "Ist or IInd Dynasties before the recent excavations "at Abydos."* (These were made by Amélineau in 1895-96.)

That Egyptian culture must have existed before it reached perfection was, of course, realized, but scholars appear to have been stupified by a course of discoveries, which during a period of nearly one hundred years (from 1798 to 1895) had led them farther and farther back in time, only to find constantly increasing evidence of an increasing perfection of art and culture as the dates grew higher. It does indeed seem reasonable to suppose that, during all this time, something might have been found to at least suggest a background of beginnings and of elementary stages of society. The essential fact is that this apparently reasonable thing had not happened.

If a tentative explanation were to be offered it would be something like this. The study of ancient Egypt is mainly the study of excavated cemeteries or tomb groups. Where one is found others are looked for. But to find

*Recherches sur les Origines de l'Egypte. L'Age de la Pierre et les Méteaux, p. 181. 1896.

even one there must be something to guide the search, something to point it in a given direction. Now the tombs of different periods are of different types and to these types correspond differences in the characteristics of location. The prospector for ore is familiar with certain surface indications but sometimes valuable mines are long overlooked in locations which have been carefully prospected. Certain signs have not been recognized or have been hitherto unfamiliar. So, with Egyptian cemeteries, the excavator is guided by past experience and this experience does not assist him to find a hitherto unknown type of tomb or cemetery. He must first become familiar with a new type of surface indication. Beyond these points some other main facts may be suggested as explanations. One is that famous sites are the most attractive to excavators, but even the fame of the once important sites has generally waned in the lapse of millenniums since the days of prehistoric Egypt. Another explanation is that surface indications—the visible survival of something above ground to suggest that there is something underneath, tend to disappear by denudation or destruction. The greater the antiquity, the less the exterior sign. Finally the existence of superstructures above the inhumation, the visible tomb, in other words, is unknown to prehistoric burials and extremely rare, in survival, under the first three dynasties.

Whatever the cause may be, the remarkable fact remains that not a single prehistoric cemetery was known before 1895 and that a large number have since been excavated. Many may now be found in a single year without exciting comment. In like manner relics of the first three dynasties are known in very considerable numbers and great variety since 1895.

The attitude of Egyptology, before 1895, toward the question of prehistoric Egyptian remains, may be illustrated by very decisive and very remarkable quotations. In 1875 M. Paul Pierret, then Curator of Egyptology

in the Louvre, wrote down these words in his Dictionary of Egyptian Archaeology: "The character of the Egyptian soil does not allow us to hope that any trace of prehistoric man will ever be found there." Pierret was then expressing a universal opinion to which opposition would have appeared unreasonable. This universal pessimism as to the discovery of remains of prehistoric Egypt had some apparent basis, but as we now realize, not a real one, in the great rise of the surface of the Nile valley, which has been due to the annual deposits of successive inundations for many thousand years. Thus, in the first edition of his History of Egypt, published in 1894 (and since revised in such particulars), Professor Petrie wrote: "Large quantities of flints are to be found lying about "on the surface of the desert. *These must not be "supposed to be prehistoric in all cases or perhaps in any "case. * * * Of other remains of prehistoric man no "trace has been found in Egypt.* His dwelling would be "upon, or close to, the Nile soil and as twenty feet of "deposits now overlie the level of that age, it is hopeless "to search there for any trace of his works." The weakness of this prevailing argument against the likelihood of prehistoric finds, lay in the fact that it did not consider one important possibility, viz., that the prehistoric Egyptians might have located some of their cemeteries on the borders of the desert plateau above the level of the rise of soil which is due to the Nile inundations.

That some prehistoric Egyptian remains had been found before 1895 is positive, but they had either not been recognized or noticed or their prehistoric character (in the case of flints) had been sturdily contested by the most eminent authorities. Thus, in 1887, Professor Maspero, the most distinguished Egyptologist of our day, had attributed pottery of a character now definitely known to be prehistoric, and which he had himself found, to the period of the XIIth Dynasty.*

*Quoted by J. de Morgan in *Recherches sur les Origines de l'Egypte. Ethnographie Prêhistorique*, p. 170. 1897.

When the enormous prehistoric cemeteries near Naqada and Ballas were unearthed by Petrie and Quibell, in 1895, the material found was not even recognized as prehistoric by these accomplished Egyptologists. It was considered, however, so remarkable as to call for a new theory of Egyptian history and the existence of a "New Race" which was supposed to have invaded the Theban territory about the time of the VIIth-IXth Dynasties and to have supplanted and destroyed the old and native Egyptian civilization of that territory. The text of the publication on "Naqada and Ballas" announced, in 1896 "a hitherto unsuspected invasion," attested by "*graves of a wholly un-Egyptian type.*"

No better commentary on the entire situation could be offered than the leaf of "Corrections" inserted, five years later, by Professor Petrie in the same publication. The reader was warned by these "Corrections" that the so-called "New Race" was simply predynastic Egyptian and "the oldest civilized people of the land," and that the dating of the cemetery should be transferred from the VIIth-IXth Dynasties to "predynastic times" and from "3200 B. C." to "7000-5000 B. C."

Thus, by a few strokes of the pen, the most distinguished excavator since Schliemann conceded the existence of a prehistoric Egypt as revealed by a cemetery whose contents he had himself unearthed five years before, in total ignorance of its significance, an ignorance which he had shared with every Egyptologist of his generation.

The words "every Egyptologist" have not been used unadvisedly. It is not often that to any one man can be definitely assigned a discovery of such tremendous significance, but in this case M. Jacques de Morgan can be definitely specified as that one man and he was not a professional Egyptologist. He did, however, hold at the time of his announcements and publications on this subject, the position of Director-General in Control of

the Egyptian Museums, and excavations, and he had himself made important excavations in Egypt.

M. Jacques de Morgan's original renown was gained, first by explorations in the Caucasus and subsequently by excavations in Persia. It was splendidly enhanced by his work at Susa, from which the Louvre Museum has obtained such priceless treasures. In his nature were combined the energy and prompt initiative of the explorer and excavator, with the patient conservatism of the scientific investigator. The earliest known relics of the culture which we know at different dates under the various names of Chaldean, Assyrian, and Babylonian, were unearthed by him at Susa (in Persian territory but representing what we have generally known as Chaldean culture). It is evident now that his strongest assets when he took the place of Director-General of Antiquities in Egypt were his proficiency in the knowledge of prehistoric art in other countries and the fact that he was not a professional Egyptologist. He had an open mind and he was not oppressed by the traditions of the scholars' caste in Egyptology.

The most remarkable fact about the revolutionary influence of Jacques de Morgan on Egyptology is that he entered on his Egyptian duties with full acceptance of the orthodox views as to the absence of evidence on the subject of a prehistoric Egypt. In the preface to the work by which he revolutionized the study of Egyptology* he has himself quoted from his own words published in an archæological journal in August, 1895, in which he coincides with, and reiterates, the then accepted doctrines of Egyptology to the following affect: stone implements in Egypt may belong to any historic epoch, even as late as the time of Ptolemies. There is no evidence for their prehistoric character. When found on

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**Recherches sur les Origines de l'Egypte. Ethnographie Préhistorique*, 1897.

This was preceded by an initial publication of the same tendencies in 1896. *Recherches sur les Origines de l'Egypt. L'Age de la Pierre et les Métaux.*

the surface they cannot be dated. It would be necessary to excavate the soil of the valley to a depth of 20 or 30 metres in order to find traces of prehistoric civilization and such a task exceeds the limits of human effort. At this date (August, 1895) de Morgan thus coincided with the views already quoted as expressed by Petrie at about the same time.

In the preface of 1897, thus quoting his own earlier and erroneous opinions, de Morgan goes on to explain his conversion as first due to personal inspection of the desert sites of neolithic remains. The stages by which his further change of views were effected need not be described, but four main converging currents of evidence may be mentioned; first: the evidence for the existence of palæolithic and quaternary man in Egypt is overwhelming and indisputable; second, a neolithic stone age in Egypt is equally indisputable; third, the tomb remains discovered by Petrie near Naqada and Ballas belong to this neolithic period, and similar cemeteries excavated by de Morgan supplement and enlarge this material, while many other remains, previously known but erroneously dated, can be added to this evidence; fourth, de Morgan's discovery in 1896 of a royal Ist Dynasty tomb at Naqada, and Amélineau's discoveries in 1895-96, at Abydos, of Ist and IInd Dynasty tombs furnish the connecting links by which the prehistoric age can be united, and connected, with the early dynastic period.

Such in brief, were the announcements of the quoted books which appeared in 1896 and 1897 and since their publication every year has added to, and corroborated, their results, by a mass of discoveries and evidence which is wholly overwhelming. In fact the time has been reached when the average visitor to the New York and Brooklyn Museums may calmly survey their exhibits of prehistoric material as one of the most natural and ordinary things in the world. Outside of professional

Egyptology the part which M. Jacques de Morgan played at the crucial moment is unknown and undreamed of. Inside the field of professional Egyptology it may even be (for such things have happened before) that the discovery is accepted and the discoverer relatively ignored or conveniently forgotten, at least by those who were most impervious to the evidence and the slowest to accept it.

II.

It was the good fortune of the Museum of the Brooklyn Institute, during the years 1907-08, to secure the services for Egyptian excavations of M. Henry de Morgan, a brother and devoted assistant of the great discoverer of prehistoric Egypt. The excavating concession obtained for the Museum from the Director of Egyptian Antiquities was in the district of Esneh. There was no special plan of campaign and no intention of searching for prehistoric cemeteries, as distinguished from those of the dynastic period. As it turned out, however, the cemeteries which were opened were mainly of prehistoric date. The collections obtained were large and valuable. M. Henry de Morgan died suddenly in 1909 in the prime of his manhood, and just at the moment when his work for the Brooklyn Museum appeared destined to add greatly to his reputation and to promote his ambitions for the future. He had, however, furnished the most careful advices as to the provenance and nature of his collections and records had been carefully made and preserved for every piece discovered.

After the delays which are usual in museum installations, these collections have now been properly labelled and carefully installed. This work was finished during the first week in January of the present year, and it is the purpose of this article to call attention to the fact and to give some brief account of the exhibits. In a sense the most important points about them have been made in the preceding introduction. It is most desirable that all who

are able to examine the Henry de Morgan collections should realize their great importance. What has so far been written of the progress of Egyptology during the years between 1798 and 1895, and of its progress since the latter date, enables us to understand that these collections would have been impossible twenty years ago. Fifteen years ago these exhibits and their labels would have excited perplexity, mystification, or general derision, if the labels were read by students.

M. Henry de Morgan was personally much interested, and deeply versed, in the problems offered by prehistoric stone implements, as found in other countries, as well as in Egypt. He was able before his death to publish a valuable and interesting dissertation on his own explorations* and to comment at length on the fine collection of palæolithic stone implements which he made, for the Brooklyn Museum, during personal visits to various desert sites.

We will first address ourselves to the subject of these palæolithic exhibits especially in order to explain, that, within the limits of prehistoric Egyptian remains, there are two wholly distinct periods and types of stone implements, the palæolithic and the neolithic.

Remains of the neolithic or later stone age, are now known to occur abundantly in Egypt, with inhumations which include pottery of great perfection and great variety of types and decoration; stone vases of marvellous workmanship in the most intractible materials; mace-heads of similar character; necklaces and bracelets of shell, pottery, and semi-precious stone beads, of considerable beauty as personal adornments; occasional implements of copper; terra-cotta figurines of deities and animals; slate palettes for grinding eye-paint, largely in animal forms which were probably also used as fetiches; and occasional carvings in ivory and bone, some of which are of exceptional interest

Notes sur les stations quarternaires et sur l'age du Cuivre en Egypte. Revue de l'Ecole d' Anthropologie de Paris. April, 1908.

and perfection. The polished stone axes, so widely found in the neolithic remains of other countries, are rarely found, but they occur. The worked flints are of great variety and remarkable perfection.

The close of this neolithic period, to which the use of copper was also familiar, connects directly with remains of the early dynastic period, as known since 1895. Its beginnings go back to the earliest time when the Nile was flowing in its present bed, and when the present soil of Egypt had begun to be deposited by the annual inundations of that river. Thus the stone implements of this neolithic period, although not necessarily found in tombs, belong to types which constantly are so found, and they belong to a culture which is represented by many other classes of objects as above described; which aid us to project a tolerably perfect picture of predynastic times in Egypt.

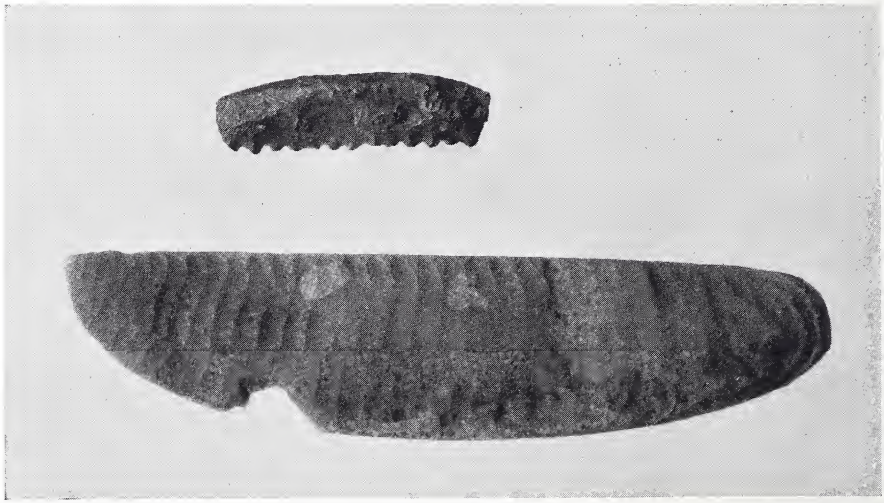
On the other hand, the palæolothic stone implements are never found in tombs, and no tombs or interments of their period are known. They are found on the desert and now uninhabitable plateaus which border the Nile, or in neighboring ravines into which they have been washed by torrential rains (which no longer occur in the same territory). No other classes of objects are associated with them and none are known in Egypt of the same antiquity.

To manufacture the palæolithic flints must have required great dexterity, but they are of much ruder and rougher types and much less varied forms than the neoliths. The most typical shapes are represented by the first figure. The main contrasts of such pieces with neolithic types are shown by illustrations two and three.

The great interest of these palæoliths is that they belong to types widely found in other parts of the known world, but never, before recent years (and not until after 1890) known to exist in Egypt. Elsewhere they are mainly found in diluvial geologic deposits known as the drift,



Egyptian palæolithic flint implements from the desert mountains west of Esneh; assigned by geologists to the quaternary period which has an antiquity approximating 40,000 years.



Flint saw from kitchen-middens at El Adamieh, early predynastic period, about 7000-5000 B. C.

Flint knife broken for ritual destruction; later predynastic period, "second period" of secondary inhumation in cist graves, ending about 5000 B. C.

and *elsewhere* they are invariably recognized by geologists as belonging to the quaternary period which has an antiquity, according to modest estimates, of some 40,000 years.

The existence of quaternary stone implements and consequently of quaternary man in Egyptian territory long before the Nile had found its present bed, and before the present climate or the existing geographical conditions came into being, is now admitted by all competent authorities. Once more it is Jacques de Morgan to whom this recognition of the existence of palæolithic man in Egypt, as a positive and undeniable addition to human knowledge, must be mainly attributed. His own works, however, quote the names of the advance guard of his forerunners in the recognition of prehistoric Egyptian flints and instances the opposition or neglect which met their opinions.

We have quoted in round numbers an approximate antiquity for the quaternary period in other territories, where approximate computations can be made as to the antiquity of the deposits in which the quaternary stone implements have been found, but it is wholly possible that quaternary man existed in Egypt down to the date of the geologic changes which established the configuration of the modern country. This date is roughly estimated by the period necessary for the deposit of the present soil of Egypt in the present desert valley and is presumed to have begun about 7000 to 8000 B. C. (by Professor Petrie's estimates).

Having thus found that the prehistoric stone implements of Egypt fall into two broad categories which may be distinguished as palæolithic or quaternary, and neolithic or predynastic (to which latter category all other Egyptian prehistoric remains belong), we now turn to a highly important division within the limits of this predynastic material.

It was the great merit of Henry de Morgan to have

constantly kept in view during his explorations, the still doubtful and debatable points of which there are naturally a very large number relating to predynastic finds. In this direction his records as to the mode of burial, furnished with every piece which he excavated from the tombs, have made possible a classification of his collections into two separate periods within the broader limits of the predynastic time. Such classification is infrequent, perhaps unknown, in other similar collections which are rarely made by one single explorer and then kept together, apart from additions through other sources.

Two wholly distinct modes of burial were practiced in predynastic Egypt, and most of the exhibits obtained by Henry de Morgan are specified as to which of these two burial methods is in question. These specifications are only lacking in the case of excavations from kitchen-middens (refuse heaps) or in the cases of purchase. These methods of burial were sequent in point of time. At least, the second method came later and preponderated after its coming, thus marking the invasion of a conquering race.

In the early burials the body is bent together, or folded, wrapped in skins or mats and placed in a pit surrounded by the usual mortuary offerings, but in direct contact with the soil.

The second method of burial employed a cist or box-shaped tomb, lined with crude bricks and covered originally by boards or by poles and boughs. A more remarkable point of difference lies in the dismemberment of the skeleton, which occurs in the cist graves. Portions of the skeleton are also frequently lacking, and the flesh and soft portions of the body had been invariably removed from the bones before the final interment. A similar practice holds with some primitive people in recent times, for instance, with the Latookahs of the Victoria Nyanza territory in Africa. There is a primary inhumation which makes the removal of the skeleton from the flesh an easy

process and this is followed by the "secondary inhumation." A still further distinction, as compared with the "folded burials," lies in the practice of "ritual destruction," also known to many other primitive races. The most valuable objects placed with the body were broken in pieces before burial, probably "to free the spirit" so that the object might accompany the deceased possessor.

Thus predynastic Egypt shows two distinct methods of burial, both wholly distinct from mummification and both wholly different from the dynastic practice. One of these is the "crouched" or "folded burial" in pit graves; the other is that of "secondary inhumation" accompanied by "ritual destruction" in cist graves. There are various pregnant indications that the invading race which brought with it the method of "secondary inhumation" was that of the Egyptians who founded the later dynastic culture. Mummification is not clearly apparent before the IIIrd Dynasty, after which it became general, and there are some curious instances in the early dynasties of dismembered skeletons which have been wrapped in mummy cloth and reset in normal position. Ritual destruction was also practiced down to the IIIrd Dynasty.

These successive and different methods of burial suggest that a great length of time must have been required for the growth of the radical changes between dynastic and predynastic ritual. There were whole millenniums of Egyptian history when the now familiar mummy was unheard of. His first appearance was an iconoclastic revolution.

There has been a tendency in recent years, mainly of German origin and radiating thence, to reduce the high dating of the Old Empire and to shorten the limits of the early (and relatively unknown) dynasties. When we consider that the hieroglyphics, pictures and statues under King Sneferu (close of the IIIrd Dynasty) are the most perfect ever made in Egypt and when we compare these hieroglyphics and other carvings with the primi-



Pottery vase decorated with ostriches, and triangles representing a range of hills. Early predynastic period, "first period" folded or contracted burial, beginning about 7000 B. C.

tive style of the Ist Dynasty royal tomb at Naqada, excavated by Jacques de Morgan, we begin to realize that the full length of time (from 1000 to 1500 years) assigned these early dynasties by the ancient Manetho and by the modern chronologists of the school of Mariette, Petrie and de Morgan, is none too long for the remarkable progress which was made during their sway. The high-water mark of Egyptian culture was reached about 4000 B. C., according to these scholars, who date the beginning of the Ist Dynasty about 5000 or 5500 B. C.

The distinction between the periods of "folded burial" and of "secondary inhumation" also calls for great lapses of time, especially when we consider the notable changes

in the character of the religion, mortuary theories, and general culture which the tomb finds indicate. Compare, for instance, the first period predynastic pottery with the second period predynastic. From the "folded burials" we have two well defined types of decorated pottery, both of which are absolutely lacking in the "secondary inhumations," and the latter have no other decorated style of their own. The art of pictorial decoration on pottery has simply disappeared. There is a third type of "folded burial" pottery, the black-topped red ware, which disappears almost wholly, and is never found in perfection, in the "secondary inhumations." As for the difference of glaze and general perfection of the polished red ware, its superiority as found in the "folded burials" is most remarkable to actual vision and well shown by the installation, although photographs cannot convey the difference.



Rare specimen of the vases decorated with boats. There are three boats on this vase; two of these are galleys with oars; on the prow is the branch of a tree to give shade to the pilot. There are two cabins; on the top of the front cabin is the figure of a female goddess supported by two male figures, one on each side. On the rear side of the rear cabin is a standard. This vase has three perforated "ears" for suspension. Found at El Adamieh, "folded burial period" beginning about 7000 B. C.



Egyptian pottery vases from cist graves with "secondary inhumation." Later predynastic period, ending about 5000 B. C.

Thus, as between the two predynastic periods, we do not find an evolution, but we find rather a series of remarkable changes of an abrupt nature, which must have resulted from the conquest, or submersion, of an earlier



The "wavy-handled" type of Egyptian pottery vase; always containing an aromatic unguent, perhaps made from palm-oil, and stopped with mud. From cist grave "with secondary inhumation," later predynastic period, ending about 5000 B. C.

race by one of different but not necessarily superior character.

Egyptian worked flints of the finest character are also found in the "folded burials." One of these is the flint knife with carved ivory handle, excavated by Henry de Morgan, at Abou Zedan, which is the finest extant specimen of its class. Over two hundred figures of animals;

including elephants, lions, gazelles and ostriches; are minutely carved on this handle. As regards stone vases the "folded burials" appear to offer fewer specimens, but among these are many of unrivalled excellence. The cipollino marble vase here illustrated was found with the ivory-handled knife.

The "secondary inhumations" have furnished a remarkable number of stone vases. The Brooklyn collection contains a variety of forms and material; including sandstone, limestone, alabaster, slate, marble, serpentine, quartz, breccia, granite, syenite, hematite and basalt. The entire Brooklyn Collection of Egyptian stone vases includes 283 pieces. Two hundred of these are predynastic and early dynastic, belonging to the de Morgan Collections.

The Museums of London, Paris and Cairo have large collections of undated stone vases, wholly lacking in specifications of period or of locality of find. These have been obtained from peasants and dealers, or from excavators who have neglected to notice or furnish the data necessary



At left. Cipollino vase, predynastic, first period. From Abou-Zedan and found in the same tomb with the remarkable ivory knife handle also illustrated. Early predynastic period, beginning about 7000 B. C.

At right. Marble vase, predynastic, first period, beginning about 7000 B. C.



Breccia vase broken on one side for ritual destruction; predynastic, second period, ending about 5000 B. C.



Alabaster plate, from a cist tomb at El Karah; dates about the beginning of the dynastic period, 5000–4800 B. C.

to a specification of the period. It is beginning to be realized that these vases must be mainly prehistoric or early dynastic, under which term the first three dynasties are mainly to be understood. The softer alabasters were used during all periods of dynastic Egypt, and especially for vases of modest or minute size, but the art of the larger and harder stone vases in porphyry, diorite, breccia, granite, marble, quartz, serpentine and basalt, is now known to have mainly disappeared by the close of the IVth Dynasty. This art was therefore not only distinctively Egyptian, but it is distinctively early Egyptian and very largely predynastic. It has no parallels, not even in China, where

the working of hard stones has always been carried to great perfection.

Before closing this sketch of the Henry de Morgan Collections we may call to mind the firm evidence which has been recently obtained for the evolution of later Egyptian art, as having occurred after the beginning of the dynastic period. This evidence has been furnished by the Abydos excavations of Amélineau, as supplemented and continued by Petrie; by the royal tomb of Naqada, discovered by Jacques de Morgan; by the excavations of Quibell at Hierakonpolis and by various other notable recent discoveries. Enough is now known of the inchoate and primitive art of the Ist Dynasty; inchoate and primitive as judged by the hieratic and characteristic Egyptian style; to make it clear that Egyptian art, as we have hitherto known it, is a development of the dynastic period. The beginnings of the later Egyptian style are clearly apparent under the Ist Dynasty but they have not so far been observed for any earlier date. In the remarkable relief carvings of the slate palettes of that period the influence of Chaldean art, or the existence of Chaldean quality in the art, is also unmistakable. There are various solid reasons for presuming that the dynastic Egyptians had originally belonged to, or branched from, the race which founded the primitive Chaldean culture.

In contrast with the Egyptian dynastic art the following points appear to hold even for late predynastic periods. There are no amulets in the Egyptian sense—and none of the forms copied in Egyptian amulets are otherwise known. There are no hieroglyphics. There are no figures of the Egyptian gods or of other gods, in fact, except animal fetiches. The well known characteristics of Egyptian design are also lacking in the rude representations of the human figure. The most obvious connecting links between the predynastic period of "secondary inhumation" and the dynastic period, are found in the forms and material of the pottery; which, in both cases, is of a utilitarian and



Painted terra-cotta figurine of a goddess, apparently bird-headed. Early predynastic period, "first period" beginning about 7000 B. C.

undecorated character; in the stone vases; in the slate palettes; in the practice of ritual destruction; and in the apparent partial survival of "secondary inhumation" as shown by the occasional practice of carefully wrapping and replacing, in normal relations, the bones of dislocated skeletons.

The above reference to the absence of figures of deities holds generally for both predynastic periods, but has one remarkable exception, during the period of folded burial.

At least, the figurines in question appear to represent a female goddess. They are of great rarity. Hundreds of tombs and dozens of cemeteries are opened without finding a single one. On the other hand the representation of these figurines over the pictures of boats on the decorated pottery of the "folded burials" is not at all uncommon. Two of the tombs opened by Henry de Morgan at Mohamerieh, in the district of Esneh, contained such figurines. There were two in one tomb and sixteen in another (the latter mostly damaged beyond repair). One such figurine has been published by Professor Petrie in his volume on Naqada and Ballas. There are several others in the Metropolitan Museum of Art.

The following list of the Henry de Morgan Predynastic Collections includes only exhibited pieces. These are a selected choice of the best examples from a considerably larger series of objects.

Necklaces and bracelets	29
Stone seal cylinders	3
Slate palettes	58
Mace heads	16
Terra cotta figurines of deities	5
Terra cotta figurines of animals	5
First period pottery	134
Second period pottery	112
Copper implements and utensils	17
Palæoliths	59
Neolithic flint and stone implements	292

These include hand mills, grinders and crushers, polishing stones, hammers, hoes, saws, knives, scrapers, spear and javelin heads, arrow heads and axes.

William H. Goodyear.

NOTES.

With sincere regret the death of Edward Lyman Morris, M. A., which occurred on September 14, 1913, is recorded in these pages. Mr. Morris was born at Monson, Mass., on October 23, 1870. He was a graduate of Amherst College, and for a time was a member of the faculty of that institution. Since 1907 he had been the Curator of the Department of Natural Sciences in the Brooklyn Museum, and for a year and a half he acted as Curator-in-Chief. He was distinguished as a botanist and as a museum man, and was a member of numerous scientific societies. Shortly before his death Mr. Morris had led an expedition to Arizona in order to make studies and collections for a desert vegetation group.

Mr. Robert Cushman Murphy, Curator of the Division of Mammals and Birds, returned last May from an expedition to the island of South Georgia in the Subantarctic Atlantic, where he had conducted field work for the Brooklyn Museum and the American Museum of Natural History. A large number of biological specimens were brought from this little known southern region, and the scientific reports of the expedition are now being published.

Prof. Wm. H. Goodyear, Curator of the Department of Fine Arts, has gone from the Museum on a trip to Egypt. Before his return he will lecture at University College, Dublin, on Medieval Architectural Refinements, at the invitation of the Classical Association and the Royal Institute of Architects of Ireland.

Mr. Stewart Culin, Curator of the Department of Ethnology is at present in the Far East in order to collect ethnological material. His itinerary has taken him to Japan, China, Korea, India and Ceylon.

Mr. George P. Engelhardt, who served on the staff of the Children's Museum for eleven years, has been transferred to the Central Museum, and now fills the post of Curator of Lower Invertebrates.

During the last summer the gallery of American paintings was structurally changed to conform with the plan of hanging the paintings in small harmonious groups. The gallery is divided into a series of alcoves, enabling the spectator to obtain an intimate and close view of the individual works. The water colors also have been established in Galleries 5 and 6, which have been adapted to these pictures. The galleries containing the early Italian works and the Renaissance masters have been remodeled and the pictures rehung.

The hall of invertebrates has been repainted in accordance with a special scheme of decoration, and a series of marine views by Mr. Herbert B. Judy, appropriate to the purposes of the room, has been arranged as a frieze.

The rooms and corridors around the lower floor of the auditorium have been utilized for the extension of the Japanese, Chinese and Ainu collections.

In order to stimulate the interest of the pupils of Brooklyn schools in the Museum and to encourage their attendance, the following lectures for elementary pupils were given in the Museum auditorium by Dr. J. P. Haney, under the auspices of the School Art League: October 19, Landseer—the man who loved dogs; November 1, Van Dyck—and other painters of people; November 15, Corot—and the painters of the woods; November 29, Michaelangelo—and the figures he carved; December 13, The Cathedral Builders. The following lectures for the general public have also been delivered in the auditorium on Saturday afternoons: Goethe's Italian Journey, Lessing's Essay on Laocoön, Winckelmann's Place in Modern History, three lectures by Prof. William H. Goodyear; Haiti and Santo Domingo, Oldest Colonies of the New World (illustrated) by Mr. Norman Taylor; South Georgia Isle, an Outpost of the Antarctic (illustrated), Bird Life in the Sub-Antarctic (illustrated), two lectures by Mr. Robert Cushman Murphy; The Sculpture of Augustus Saint Gaudens (illustrated) by Mr. William H. Fox. For older school children and for the members of the School Art League, with whom the Museum is acting in co-operation, a course has been arranged of which the first two lectures were given on February 28th and March 14th; the other is to follow on March 28th.

Beginning on October 26th, 1913, the Library was opened on Sunday afternoons from 2 until 6 o'clock. The increased attendance has more than justified the change.

The Museum is now exhibiting wood, copper and steel engravings, mezzotints, etchings and other forms of prints. A suite of three rooms including a gallery of 77 feet in length, leading to the Library, has been set aside for their exhibition. A small but choice collection of etchings loaned by Mr. H. L. Quick of Brooklyn is on view, as well as a set of the lithographs of the Panama Canal, by the well known artist, Joseph Pennell, which are owned by the Museum. The Print collection numbers about 3,000 and Brooklyn collectors are already showing a keen interest in it.

A collection of rare maps, tracing the New World from its first appearance on any chart in 1482, up to the year 1589, is on exhibition in the Library. It is loaned by Mr. Alfred T. White of Brooklyn.

A unique set of photographs of 17 American and 52 foreign artists has been presented to the Museum by Mr. Samuel P. Avery. This is to be made the basis of a collection of photographs or likenesses of artists whose works are represented in the Museum. Mr. Avery has also presented 239 autograph letters of artists which are of much interest and importance. The Museum Library has a large collection of autograph material, the foundation of which was the John M. Burt collection of more than 2,000 pieces, the gift of his daughter, Mrs. Henry D. Love, in 1910.

Recent accessions to the Museum collections include the following objects:—paintings by Jacob Jordaens, Zuccarelli, Jan Steen, Joos Van Cleef, and a Battle Scene by Borgognone given by A. Augustus Healy; landscapes by Sorolla y Bastida, C. Doughty, and George Boughton, obtained by purchase; painting by Wm. M. Chase, lent by Mrs. Alex. Purvis; paintings by Mancini, Israels, J. Akkeringa, an example of the 15th Century Venetian School, and two bronzes by Constantin Meunier, lent by A. Augustus Healy; portraits by Gilbert Stuart, Thomas Sully and M. J. Mierevelt, lent by John Hill Morgan; one-hand Danish clock made on the island of Bornholm in the Baltic Sea in 1800, given by Dr. Axel Hellring; suit of Japanese armor, given by Walter J. Graecen; small war god—Chinese bronze, given by Adam Denzler; six Japanese temple ramas, a collection of old Venetian glass, a Sultanabad jar and pieces of iridescent pottery, a collection of miscellaneous Greco-Roman bronze objects including a statuette of Aphrodite of the 1st century, from Syria, obtained by purchase; bronze group, "The Wounded Comrade" by Carl Akeley, given by George D. Pratt; a bronze medal, representing the inauguration of Woodrow Wilson as President, given by the Corcoran Gallery of Art; a silver medal by E. Fuchs in memory of J. P. Morgan, given by Samuel P. Avery; ancient glass and Saracenic pottery, Sumah Kilm rug (Persian) two stone statuettes, French of the 15th Century, a bronze figure by Alessandro Algardi and six Chinese bronzes of the Chou and Han Dynasties, given by Col. Robert B. Woodward: twenty-four paintings as follows, the gift of Mrs. Carll H. De Silver:

Fedor Encke	Portrait of the late Carll H. De Silver
V. Brozik	Children's Toilet
L. Perrault	Mirror of Nature
H. Harpignies	Crest of the Hill
	Cottage in the Woods

G. Inness	Royal Beech, Lyndhurst Forest
A. Wyant	Keene Valley
A. Vollon	After the Storm
C. F. Daubigny	Moonrise
G. H. Boughton	Olivia
D. Johnson	Trees
C. Y. Turner	Chrysanthemums
W. V. Birney	The Encore
J. Maris	Sandbarge on the River
M. Rico	Canal at Venice
J. C. Vibert	Embarrassment of Choice
A. W. Kowalski	Windy Day
E. Boudin	Harbour at Treport
	Church Tower by a River
Grison	The Bookworm
R. S. Gifford	Trees and Meadow
W. M. Chase	The Antiquary's Shop
	In the Studio
Berne-Bellecourt	The Attack.

Additional gifts have been received from Austin M. Curtis, J. Polk, Jacob Doll, George P. Engelhardt, Frederick Schlottman, Walter Weiss, C. J. Woodward, Charles H. Unkles and Fenwick W. Wall, Doctor D. S. Martin, the Hon. Alfred E. Steers (Borough President), Rev. Alfred Duane Pell, Mrs. O. Rugg, Mrs. Henry N. Niles, Mrs. Treadwell L. Ireland, the Misses Annie Marsh, Mary Benson, Katherine M. Husted and Mr. and Mrs. E. LeGrand Beers.

Among the recent gifts to the book collection are Arthur Hayden's Royal Copenhagen Porcelain, from Mr. W. A. Putnam, which is a useful supplement to the Museum exhibition of that porcelain in the Art Department; The Vanishing Race, from Mr. Rodman Wanamaker; the Catalogue of a Loan Exhibition of Paintings by Old Dutch Masters, from the Metropolitan Museum; several works of geographical interest from Mr. Herbert L. Bridgman; a Bible with illustrations by Gustave Doré; and the Furniture Collectors' Glossary, from Mr. L. V. Lockwood.

A special exhibition of 143 drawings for mural paintings by Edwin Howland Blashfield began in February. A large oil painting by Mr. Blashfield, entitled The Gates of Life and Death has been included in the exhibition.

The attendance at the Central Museum in 1913 was 197,263, an increase of 38,052 over 1912.

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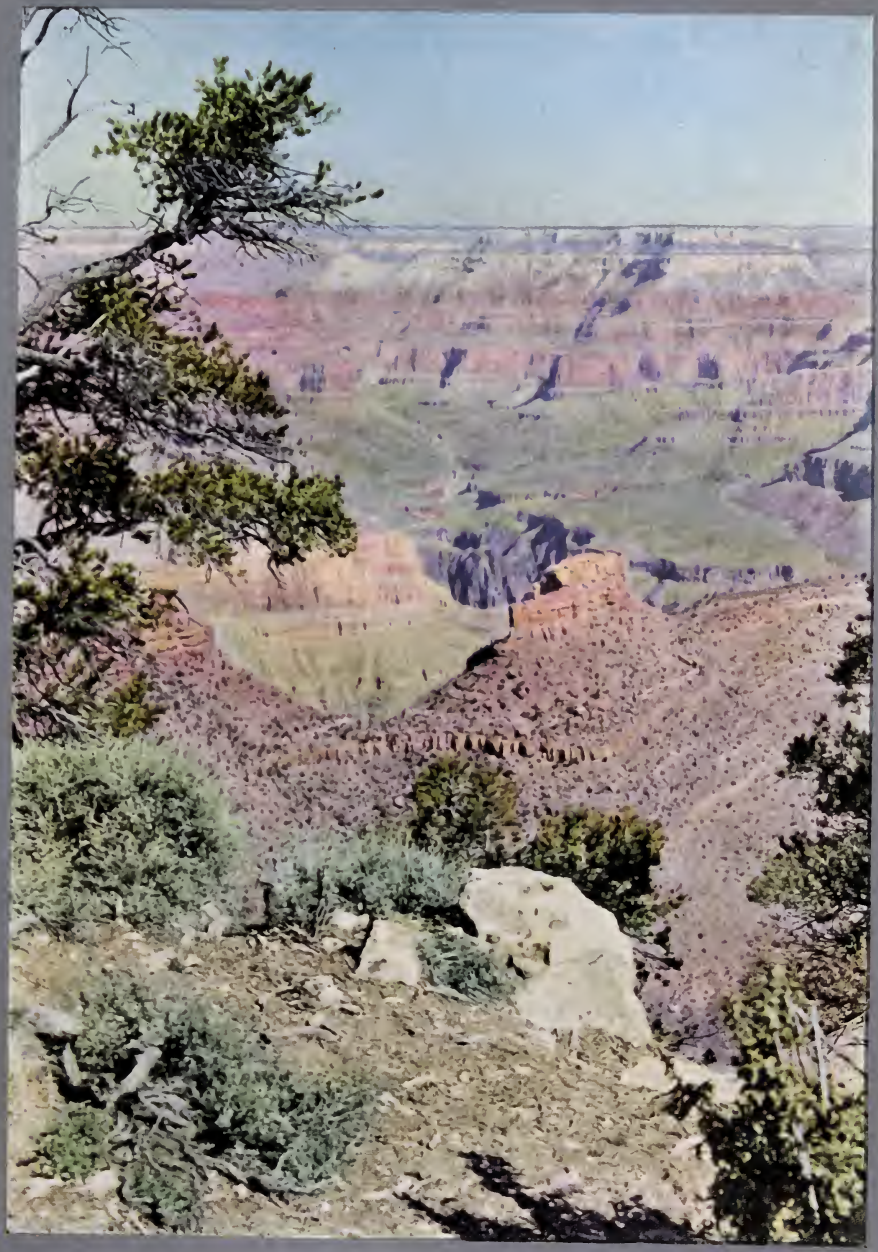
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FIVE REPRODUCTIONS
FROM AUTOCHROME
PHOTOGRAPHS OF THE
GRAND CANYON
Taken by GEORGE D. PRATT





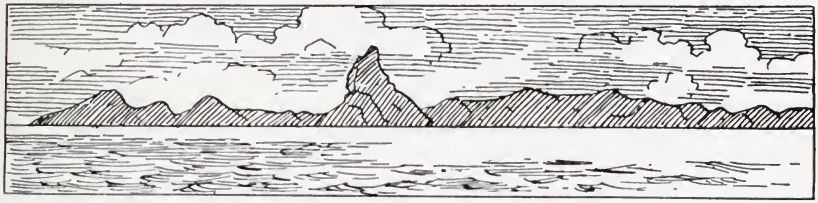






CRUISING IN THE SOUTH ATLANTIC[1]

FROM THE EQUATORIAL ISLAND OF FERNANDO NORONHA TO SOUTH GEORGIA ON THE THRESHOLD OF THE ANTARCTIC; AN ACCOUNT OF THE MUSEUM'S RECENT EXPEDITION TO THE FAR SOUTH.



ON October 15, 1912, the good whaling brig *Daisy* of New Bedford was running merrily across the trade wind just south of the equator. All day long boobies and other passing sea birds told us that we were nearing land, and at nine in the evening we made out the twinkling, revolving light of an island lying under the bright quarter moon. We hauled aback our square sails and lay to for the night.

The bold, overhanging "Pyramid" of Fernando Noronha, a black, phonolite mountain which is the most conspicuous landmark in all the South Atlantic, loomed out about nine miles distant in the following dawn. As we bore down toward the land in the hazy light, the long strip of rough hills, which had first seemed continuous, gradually broke up into the several islets of which the group is composed. The sun, leaping above the equatorial horizon, revealed a green lowland, well clothed with shrubs and small trees, and a higher zone of bare, weathered peaks. The four tall, skeleton "wireless" towers were probably the only features which had been added to

[1] Article and photographs, copyright 1914, by Robert Cushman Murphy.

the landscape since Charles Darwin in the *Beagle* visited this Brazilian penal settlement fourscore years ago.

Fernando Noronha lies in latitude 3° 50′ S., longitude 32° 25′ W., two hundred miles off the South American mainland, from which it is divided by a channel 13,000 feet in depth. The rugged group is only about seven miles long, by one and a half in width. The component islets, portions of the crater rim of an ancient volcano, are of basaltic rocks, without sedimentary deposits, but with injected dykes of phonolite or "clinkstone," the whole now almost worn away by the action of the denuding tropical rainfall and the battering seas, although the famous, columnar Pyramid still rises to a height of 1,089 feet. Most of the smaller islets are bare of vegetation except for a few grasses and sedges, some thickets of a low shrub and several leguminous vines. Parts of the main island are covered by a variety of stunted trees and shrubs, including an endemic fig (*Ficus noronhae*) and a leguminous tree (*Erythrina*). There is a large percentage of widely distributed tropical weeds, and a remarkable number of plants having edible berries or seeds. Within the memory of man the leeward side of the land was heavily forested, but the larger trees have long since been felled in order that the exiled convicts, practically the only human beings to share the sea-beaten spot with countless nesting ocean birds, might not build rafts and escape to the shores of Brazil.



A noddy tern (*Anous stolidus*) hovering over the whaleboat.

When the *Daisy* had drawn within a couple of miles of the coast, whaleboats were lowered, and I went ashore along with a fishing party. On the way to the land we were surrounded by an enormous flock of noddy terns which stretched away to the

far horizon until the birds appeared like tiny, swarming insects. Passing several conical inaccessible islets, on which man-o'-war birds were breeding, we entered a cove of grottoed rock ending in a crescent of sand. Behind the beach the fissured, yellow wall of a cliff, conforming with the semicircular outline of the cove, rose sheer to a height of four or five hundred feet, and clustering in thousands along its upper surface were graceful noddies on their scaffold nests. Side by side on a twisted bough at the foot of the cliff sat two snow-white "love terns" (*Gygis*), antitheses of the black noddies.

The cool water of the cove lured us to a swim, and, as several of us plunged in, the blurred image of a green turtle glided away before us, and a shoal of porpoises see-sawed leisurely across the inlet. One of the sailors fired his gun from the whale-boat at something or other (which he did not hit), and the roar reverberated from face to face of the curving wall, while a horde of screaming birds poured down off the rocks, adding to the bewildering echoes.

Other inhabitants than the birds were also disturbed by the report of the gun. When we turned toward the beach a tall, black, muscular fisherman, with a tattered seine over one shoulder, and wearing not a stitch of clothing, stood eyeing us curiously. Presently out of the shrubbery below the cliff came a fellow of lighter skin, clad in short canvas trousers and a blue tam-o'-shanter cap, and with a crude wicker basket slung over his back. The pair might have passed for Robinson Crusoe and his man Friday on washday. The cap of the second native came off obsequiously when we landed, while both men extended a right hand of welcome and ingenuously explained in Portuguese that they were murderers serving sentences on the isle. The quadroon had been there fourteen years, and his durance was to terminate at the close of eight months more when he would return to his native Pernambuco. He directed

us to a better beach around the westward promontory, where he said he would meet us. Accordingly we pushed off shore, while the poor islander, taking a pair of goat-skin sandals from his basket, painfully toiled up a stony, winding path across the ridge, leaving his comrade to cast the net alone.

After our whaleboat had rounded the point of rock there lay before us a charming bit of seashore. The broad beach of golden sand stretched in an even curve to another headland a mile beyond, and sloped gently into the sea which for a long distance from shore was wondrously transparent. The upper beach was a riot of vegetation, among which the tropical morning-glory, *Ipomaea pes-caprae*, and a slender-stalked cactus were conspicuous; and still beyond, a thicket of brush and trees, filled with fruit-eating doves, concealed the base of the precipice. The latter ran parallel to the water-line as far as the distant headland. Its lower face was covered with vines which clambered up the seams, and its crest was bordered with pink and orange-colored blossoms of small trees whose roots drooped over the edge. Sharp slabs of rock projected here and there, offering perfect nesting sites for the birds which appeared in hosts whichever way we turned. The chattering noddies, of two species, were most abundant, but large-eyed *Gygis* terns, and satin feathered bo'sun birds (*Phaethon*), trailing their comet tails, were flying to and from the niches in the cliff; a flock of migrating plover pattered along the edge of the sea; and boobies and man-o'-war birds came wheeling in fearlessly from their feeding grounds off shore.

For the sea birds it is always springtime at Fernando Noronha. The year is divided into rainy and dry periods, January to July, July to December, respectively, but there is no fixed breeding season, and eggs and young can be found in every month of the twelve. For this reason the isle is a great center and source of avian population;



The brig *Daisy* of New Bedford. Note the whaleboats, of which the *Daisy* carried five, and the lookouts at both mastheads.



One of Mother Carey's chickens (*Oceanites oceanicus*). This species nests in the far south but it traverses the length and breadth of both north and south Atlantic on its wanderings.

even such maritime species as the bo'sun birds, which spend most of their lives in the remotest parts of the ocean, can here be seen in their cliff-built homes from the year's beginning to its end.

Our volunteer guide had removed his carefully fostered sandals on leaving the rough rock, and now awaited us on the beach. The *Daisy's* cooper and I joined him, the rest of the boat party rowing off to a reef to fish. The guide, who was informed of our mission, pointed out the nests of the various birds, and captured for us some of the small lizards which scurried over the sand and rock everywhere. He talked glibly in his Brazilian jargon, giving voluminous information concerning the severities inflicted upon the unfortunate exiles. We met a number of his equally unclad fellow prisoners, as well as several pitiful, rheumatic, illiterate boys, children of the convicts, who, like the adults, followed and assisted us for the sake of gathering our empty cartridge shells. Finally the Pernambucan took the cooper on a visit to some of the convicts' *casas*, miserable huts, half-thatched with cocoanut leaves and destitute of furniture. The women, some of them whites of unmixed blood, were almost as sparsely clothed and as woe-begone as the men.

During the absence of my companions I climbed a rough, nearly perpendicular footpath into the woods. Thorn-shrubs, trailing vines, and numerous berry-bearing plants, among which the wild doves were feeding, made a fairly dense cover. The "Pinhao" or pink-flowered tree which we had noted from the beach, was leafless although in full blossom, just as on the occasion of Darwin's visit in 1832. I ascended as far as possible up the bare, steep side of the Pyramid. Directly below me lay the long, picturesque beach, with the fleet-winged birds crossing and recrossing it. Not a trace of the work of human hands was in sight. Here was Prospero's isle, cooled by a tireless trade-wind—a land where fruit trees and melons flourish without cultivation, a

land which might become a second Bermuda, yet for a hundred years it has been given up to wretched criminals under the callous regime of the Brazilian penal system.

When we joined our fishing party late in the afternoon we found the whaleboat well laden with various brightly-colored tropical fishes and several sharks. The latter had been a great nuisance to the fishermen all day, biting many of the smaller fishes from the hooks before they could be drawn to the surface, and nipping the larger ones clean in half.



A tropical fish nipped in half by a shark. Photograph taken at Trinidad Islet in the South Atlantic.

As evening drew near we perceived the brig bearing down the coast toward us, and reluctantly we sailed off to join her, leaving the allurements and the misery of Fernando Noronha. At dusk we were running swiftly down the trade wind, the Pyramid behind us still showing faintly through a bluish haze.

On the following day a flock of "Mother Carey's chickens" (*Oceanites oceanicus*), the same little petrels which enter New York harbor every spring and autumn, picked up the wake of the *Daisy*. Thereafter these sea-sprites were our daily companions during the three thousand mile voyage toward the Antarctic. Whales, too, were sighted continuously as we neared the southern edge

of the tropics. One afternoon several young, frolicsome finback whales played round the brig for an hour. They would turn their white bellies upward as they passed our quarter, and shoot like torpedoes forward around the bow, or dive amidships to reappear on the opposite beam. One of them turned a complete backward somersault alongside. Sometimes they would lag astern and disappear, but after a few moments would come puffing up our track again, making a metallic, "tin-panny" sound whenever they spouted. It was exciting to watch the green submerged spots through the reflecting hood of my camera while waiting for the dark backs and little trigger fins to pop up and offer a target for a snap-shot.

In the latitude of Sao Paulo, Brazil, on October 28, we encountered cool weather and a heavy ground-swell, indicative of storms to the southward. This day, at six in the morning, the steward came to notify me that a "goney" (great albatross) was about. I hurried on



The Ancient Mariner's Bird. A wandering albatross (*Diomedea exulans*) wheeling across the *Daisy's* stern and showing the full extent of his great wings.

deck. Nearby in the morning sunlight flew the long anticipated fowl of the Ancient Mariner, even more majestic, more supreme in his element than my imagination had pictured. He was mature—all white and black—and as he turned and turned, now flashing his bright under side, now showing the black that extended from wrist to tip on the upper surface of his wings, he seemed never to vibrate the narrow planes, but lying on the invisible currents of the breeze, followed his pinkish bill wheresoever it led him.

He remained with us only a few minutes, but at noon he came back again, covering tens of miles in the swift wide circles which he traversed astern. The lower wing often cut the water in his turns, and he used his great webbed feet perhaps more than his stubby tail in steering. Twice he dropped into the sea and allowed us to draw away a long distance before rising and overtaking us. It was a curious sight when he prepared to alight under our stern, and then, changing his purpose, ran heavily along the water for a hundred yards, before his stiffly set wings could raise his large body into the air.

November, during which the *Daisy* crossed the south temperate zone of the Atlantic, was a month of storms, but the oceanic animal life was more abundant and varied than in any other part of the cruise. Logger-head turtles, sunfish, whales and porpoises, were cried frequently from the mastheads, and sea birds of at least twenty species followed us day



A captive giant petrel (*Macronectes giganteus*).

after day. To sit on the *Daisy's* pitching stern and "fish for birds" was a favorite rough weather sport. "Cape Horn pigeons" (*Daption*), shearwaters, giant petrels, albatrosses, and a dozen other varieties would quarrel furiously over a treacherous bait trailed only for their destruction, and sometimes we had a whole flock of captive birds shuffling about the main deck, quite unable to launch into flight from a space so confined. On November 15 we crossed the forty-third parallel, and just as the sun was sinking beyond a choppy horizon, we heard a curious, braying call from among the waves. Then, half a ship's length to windward, we saw the first penguin. Only its sleek head and bristly tail projected above the surface. It brayed again, and dived, but during the twilight of the next hour shoals of these slippery, reptilian birds kept passing us, for we heard their cries from all directions.

Most abundant of all the seabirds of the southern oceans, perhaps, indeed, most numerous in individuals of all birds on earth, are the "scoopers" or "whalebirds"



A whalebird (*Prion*) and its single egg. South Georgia.

of the genus *Prion*. The whalebirds are so called because their food consists of the same pelagic, surface-swimming crustaceans upon which the whalebone-whales subsist. Flocks of these small, delicate, blue and white petrels crossed the *Daisy's* course like snow flurries, through the breadth of the southern temperate belt. The whalebird's flight is twisting and erratic, like that of our whip-poor-will, and when flocks of them were being tossed about in a gale, a million white breasts would seem to flash out at once against a background of lowering sky, as the birds wavered and rocked in the violent air. Sometimes they skipped along the surface of the ocean in bands, and, all springing up together, resembled a school of gleaming flying-fish. One afternoon as we "lay to" in the midst of a raging southwest puff, three or four hundred whalebirds settled on the water near the stern of the *Daisy*, and for a quarter of an hour I had an opportunity of watching them feeding while many of the birds were within twenty feet of me. I soon understood the significance of the name "scooper" which is applied to them by whalemen. The birds progressed along the water with an odd crawling motion, resting the breast upon the surface but holding the wings about an inch above it, the webbed feet furnishing the motive power. Then as they scurried along quite rapidly the heads were thrust under the water and the open, lamellated bills "scooped" for food. The flock recalled a human swimming race in which each contestant was using the "crawl stroke," for the bodies of the birds were stretched out upon the water in much the same way. Continously, however, birds would slip below the surface out of sight, and emerge a foot or two, or perhaps a yard, ahead. They did not stay under more than a fraction of a second except when they shot through the crest of a smallish wave, as sometimes happened. In a definite field on the water birds were disappearing below and reappearing with such

rapidity that the area fairly twinkled. About as many were below as above all the time. There was a very rugged sea, with wide troughs between the waves, and whenever one of the great rollers with a white and broken crest came along, the birds did not attempt to dive through it, but arose from the water at the last moment, flew through the spume of the comber, and alighted on the downward slope beyond.



Two birds at one camera shot. A sooty albatross (*Phæbetria*) and a "Cape Horn pigeon" (*Daption*).

Southward across the "Roaring Forties," into a sea perpetually troubled, the good brig *Daisy* ploughed along, sometimes lying with her prow to the blast, buffeting the "Cape Horn swell" under a forestaysail and a diminutive trysail,—sometimes running straight before the wind, with only her square, foremast sails set, and lurching to the gunwales both port and starboard. A back draft of wind prevented the possibility of keeping a fire in the cabin where the temperature was generally about 44° F. Several of our warm weather sailors, Portuguese islanders and West Indians, were thoroughly miserable at the prospect of a climate still more severe. It was too cold below board to do anything sedentary and too rough to do anything vigorous. On deck I could but hold on to a rope end, or maintain equilibrium by sitting, with an aching back, in one of the jerking, groaning whaleboats, lashed at the very top of the davits. At meal times we dived to our cabin stools,

which were screwed to the floor, and sat swaying to and fro, balancing a soup bowl in one hand, and watching the rise and fall of the watery horizon through a barred stateroom port, while the steward made his precarious trip from the galley. But on deck it was glorious even if uncomfortable. The veiled sun occasionally filtered through the prevailingly gray canopy of clouds and made curious pinkish areas on the sea. Still more rarely the massive, round clouds parted, letting the bright beams through to the cavorting waves and the backs of the little silvery whalebirds. Whenever at night we could see the stars the Pleiades had sunken lower and lower in the north, while the nebulous Magellan's Clouds had risen more and more toward the zenith. Usually, however, the evenings were as squally and blustery as the days, and one could only lie braced in one's berth, listening to the swish of water on the main



A foraging "mollymoke" (*Diomedea melanophrys*).

deck or to the trickling of high frothy seas through the cabin companionway.

Green, snow-topped icebergs, and squalls of granular sleet, served to keep the lookouts of the *Daisy* apprehensive and alert after mid November. The satisfaction of all on board was genuine when on the twenty-fourth of the month we dropped anchor in Cumberland Bay, South Georgia. It was springtime at this treeless isle. The mosses and budding tussock grass made the coast hills verdant up to the retreating snowline. The sun, shooting long rays from the north, filled the moraine meadows with swollen brooks. East of our anchorage, on a hummocky greensward, bounded by the bay and by glacial gulches, a small herd of feral horses had contrived to eke out an existence through the winter. We learned that horses had been left originally at the island years before by the members of a passing Antarctic expedition, and that the animals had since multiplied and had become truly wild, though without acquiring fear of human beings. The few I saw were sturdy and sleek, with shaggy manes and fetlocks. When I invaded their neighborhood they left off grazing and trooped toward me, and one young stallion nibbled at my sleeve all the way across the meadow. Except for long established common rats, the only other land mammals of South Georgia are Lapland reindeer, which have been introduced by Norwegian whalemen. Several Cape Verde Island sailors belonging to the *Daisy's* crew were astonished beyond measure at meeting a herd of the unfamiliar, long-horned ruminants—"goats," they called them—on the mossy, tundra-like hills south of Cumberland Bay.

South Georgia is now the headquarters of the greatest whaling industry on earth. Five Norwegian, one Argentine, and two English stations are situated in the fiords of the northern coast, and tiny steamers hunt the humpback and finback whales throughout the year.



Cutting up a humpback whale at the slip in Cumberland Bay, South Georgia.

The business is conducted according to the modern "shore method," the whales being shot with bomb-harpoons from the bows of the steamers, and then inflated with air and towed to the stations. They are next drawn tail foremost on to a "slip" by steam winches, and by the same means are stripped of blubber after longitudinal incisions have been made with hand knives. The blubber is finally cut into blocks of convenient size and tried out in live steam. The workmen employed are mainly Scandinavians, and they are a stalwart and contented looking band. They labour during regular hours, have five meals a day, according to the Continental custom, and rest on Sundays. The last does not apply, however, to the crews of the whaling steamers, whose only rest from one year's end to another



Grace Glacier in the Bay of Isles, South Georgia.

comes when they are in harbor stormbound. The men receive wages and also a share of the value of the catch, hence the success of everyone depends upon the skill and fortune of the gunners.

The naturalist George Forster, who accompanied Captain James Cook on his renowned voyage toward the South Pole in the year 1775, had written prophetically of the possible exploitation of South Georgia, although even his farsighted imagination had failed to picture the rapid strides which adventurous commercialism would make. "South Georgia," wrote Forster, "besides being uninhabitable, does not appear to contain any single article, for which it might be visited occasionally by European ships. Seals, and sea-lions, of which the blubber is accounted an article of commerce, are much more numerous on the desart coasts of South America, the Falkland, and the New Year's Islands, where they may likewise be obtained at a much smaller risk. If the northern ocean should ever be cleared of whales, by our annual fisheries, we might then visit the other hemisphere, where these animals are known to be numerous. However, there seems to be little necessity to advance so far south as New Georgia in quest of them, since the Portuguese, and the North Americans, have of late years killed numbers of them on the coast of America, going no farther than the Falkland Islands. It should therefore seem probable, that though Southern Georgia may hereafter become important to mankind, that period is at present so far remote, and perhaps will not happen, till Patagonia and Tierra del Fuego are inhabited and civilised like Scotland and Sweden." Forster's reference to the possibility of the northern ocean being "cleared of whales" indicates at least that he was not obsessed by the "fallacy of the inexhaustible."

On the South Georgia banks the abundance of whales is nothing short of astounding, but as during our visit I sometimes saw eleven steamers hunting almost within



"Johnny penguins" at the surface. Their food consists of free-swimming crustaceans.



Photo by J. Innes Wilson.

Roaring forth his defiance. A bull sea elephant (*Mirounga leonina*), Cumberland Bay.



THE NORDENSKJOLD GLA

hail of each other, and as twice that number often came into the ports with from two to ten whales apiece, the various species can hardly hold their own many seasons longer. The newest vessels are equipped with the diabolical device of *two* harpoon guns, one on either side of the prow, so that the gunners may take advantage of a humpback whale's tendency to linger near a stricken mate.

The British Government has put into force the following conserving regulations, several of which, unfortunately, apply only to companies that have very recently obtained their leases: 1, limitation of the number of steamers to two per company; 2, an export duty upon oil; 3, protection of cow whales when accompanied by calves; 4, compulsory use of the entire carcass, *i. e.* the manufacture of fertilizer as well as of oil, etc. It is obvious, nevertheless, that the limit of the slaughter of the most valuable animals in the world will be reached only when the number of whales has dwindled below the point of minimum profit.



LAND BAY, SOUTH GEORGIA.

A hundred years before the advent of whaling, South Georgia had become a famous hunting ground of sealers in spite of Forster's deprecating remarks. During the early nineteenth century Americans seemed to have held a monopoly in the fur-seal trade. Captain James Weddell, the brave English navigator, who visited the island in 1823, wrote in his account: "formerly the furriers in England had not the method of dressing them [fur seal skins]. At the same time, however, the Americans were carrying from Georgia cargoes of these skins to China, where they frequently obtained a price of from 5 to 6 dollars apiece. It is generally known that the English did not enjoy the same privilege; by which means the Americans took entirely out of our hands this valuable article of trade. The number of skins brought from off Georgia....cannot be estimated at fewer than 1,200,000."

Since 1825 fur sealing at the southern Atlantic islands has been a decadent commerce. As the prey became scarcer the brave fleets of the early days gave way

to lonely prowling schooners which poached from the fur seal rookeries of the Falklands, or reaped the meager harvest of a few seasons' repletion at South Georgia. Fur seals are believed to have been practically exterminated at the latter island about 1874, but rumor has it that a New Bedford vessel made a small, illegal catch there in 1907, since when not one seal has been reported.

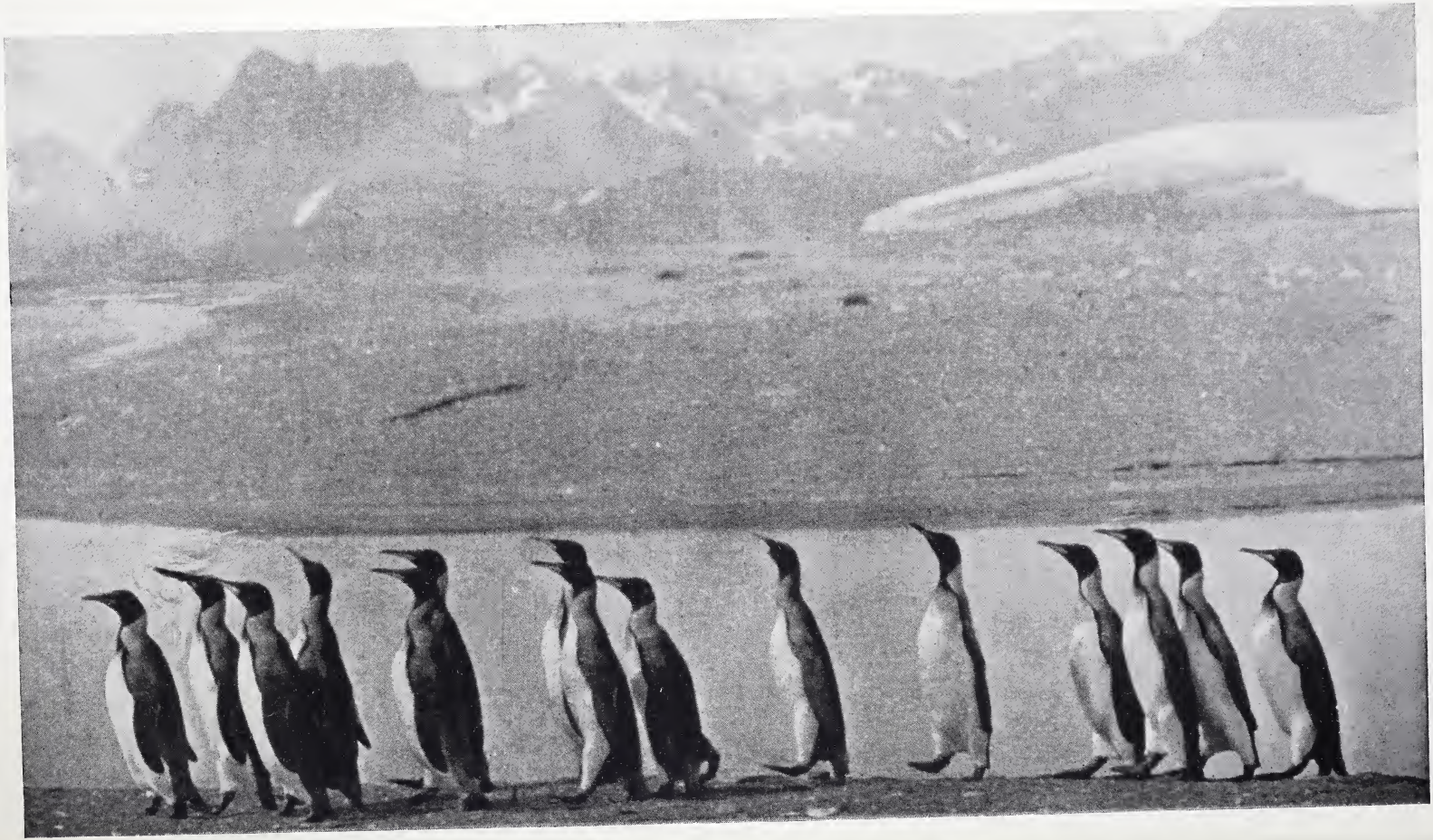
The story of the sea elephant is not unlike that of the fur seal. The species was cleaned out successively on the South American coast, the Falklands, Tristan da Cunha, and the South Orkneys and Shetlands. At South Georgia persistent killing pushed it so near the verge of utter extinction that in 1885 the crew of a Connecticut schooner during ten weeks of the breeding season (September to January) was able to find only *two* of the animals. From before that date, however, until after the beginning of the twentieth century, the seat of the



A group of pup sea elephants asleep on the icy shore of Cumberland Bay. The picture was made from a cliff above the beach. The whale ribs and vertebrae are tokens of the nearby whaling station.

"elephant oil" traffic was transferred from the south Atlantic to the fresher islands of the Indian Ocean, and so the species was given an opportunity partially to regain its foothold at South Georgia. During the last few years hunting has been resumed there, not only by occasional sailing ships from American ports and elsewhere, but also by one of the South Georgia whaling companies, which, through the employment of steam vessels and highly efficient methods, has made extensive inroads upon the male sea elephants after the end of the breeding season, as many as 6,000 old bulls having been taken during one summer. The resident whalemen are at least inclined to observe the spirit of statutes which have been enacted for the protection of animal life. The captains of antiquated windjammers from New Bedford, on the other hand, perhaps consider South Georgia outside the realm of human jurisdiction, and living at slight expense they can afford to visit the island for a raid yielding even a few hundred barrels of oil. During our stay I saw wholesale killing during the "close season," as well as the destruction of probably a thousand female and "pup" sea elephants, which are at all times protected by law. As an example of incidental vandalism I saw many of the magnificent and rapidly disappearing king penguins (*Aptenodytes*) of the island destroyed in order that their gold-collared skins might be used as *shoes* by New Bedford sealers.

At Cumberland Bay and at several other South Georgian fiords I had an opportunity of observing the ancient method of sea elephant hunting for a period of nearly four months. In taking sea elephants the hunters plan first to drive the animals as near to the water as can be done without risk of their escaping. After this they are clubbed, lanced, or shot, or all three if necessary. Sometimes they can be frightened and sent bounding toward the sea by the sound of small stones rattled in



KING PENGUINS MARCHING THROUGH GEORGIA

This species (*Aptenodytes* ...) ... its cousin the Emperor penguin.

an iron pail. If, however, they prove too sluggish or refractory they are often treated with the most revolting brutality; anything seems to be permitted which will urge them beachward and so lighten the labor of carrying blubber. I have seen old bulls pricked and beaten until their eyeballs were broken, in the sealers' efforts to disperse a close-huddled "pod."

The old American method of utilizing the blubber is wasteful in every stage. After the slain "elephant" has been allowed to bleed thoroughly, the hide is slit lengthwise down the back, and then transversely in several places from the dorsal incision to the ground. The flaps of hide are next skinned off, and the remaining investment of thick, white blubber is dissected away from the underlying muscle and cut into squarish blanket pieces. The animal is then rolled over and the same process repeated on the ventral side. Thus the hide, and the considerable amount of blubber which clings to it, are lost at the start.



A sea elephant attacked by a New Bedford sealer with a lance.

The blanket pieces of the blubber are hauled to the water's edge to be strung on short ropes called "raft-tails." These are towed to the anchored ship, where each laden raft-tail is looped about a hawser which extends from bow to stern, and the blubber is permitted to soak for forty-eight hours, or thereabouts, until the red blood corpuscles have been practically all washed away. During the soaking process a certain proportion of the oil is lost, and, moreover, flocks of ravenous "Cape pigeons" (*Daption*), and other ubiquitous sea birds, feed upon the floating fat, with an interminable hubbub, both night and day. When the blubber is hauled on board it is cut into narrow strips called "horse pieces," and is afterwards "minced." The mincing differs from the same process in sperm whaling only in that the fat is cut very finely with hand knives. At this stage an additional loss of oil occurs, particularly if the temperature of the air chances to be well above the freezing point. Finally the minced blubber is "tried out" in the familiar deck try-works of the old whaling type. There is so little residue or "scrap" from boiled sea elephant blubber that the Heard Island sealers of last century used to calculate "a cask of oil from a cask of blubber."

During the brief southern summer of 1912-1913 the *Daisy* lingered in the fiords of South Georgia, while we collected specimens of the fauna and flora of the island's kelp-fringed shores, plotted bits of unknown coast, recorded the phenomena of weather and glaciation, and gathered at least fragmentary information concerning the life histories of remarkable birds and marine mammals. Too soon, for thorough work, we were obliged to turn again northward in March, the beginning of Antarctic autumn.

The chain of Subantarctic islands, of which South Georgia is one, offer a peculiarly important field for further scientific investigation. A casual glance at



A young and fat bull roused from his slumbers among the tussock hummocks.



South Georgia shags (*Phalacrocorax atriceps)* at their nest on a ledge over the sea.

the imperfect maps of these rugged lands is evidence that their resources, — biological, geological, physiographic, can scarcely have been more than skimmed by the brief passing visits of vessels engaged in Antarctic exploration. Most of these islands are the projecting summits of sunken continental ranges; and oceanographic research in adjoining waters will eventually enable us to plot accurately the bridges which probably extended from the larger and less severe Antarctica of an earlier geologic time to the other great land masses of the southern hemisphere.



The Ancient Mariner's bird at home. A male wandering albatross standing beside his mate on the nest in the snow-filled tussock grass.

The time is ripe for an American expedition to the far south. Scientific research, which will have a direct bearing upon commerce, weather-forecasting, and conservation of economic animals such as whales and seals, is urgently needed. It is remarkable, considering American zeal in north polar regions, that our organized



CITIZENS OF SOUTH GEORGIA, "JOHNNY PENGUINS" (*Pygoscelis papua.*)

activity has been conspicuously lacking in the south, where, indeed, we have done nothing at all commensurate with the importance of the work or consistent with our own traditions as a people of pioneers and seafarers. While the European nations, beginning in 1772 with Capt. Cook's invasion of polar seas, have kept up a fairly close sequence of southern voyages the United States may point only to its national expedition of 1839-1840, when Lieutenant Charles Wilkes, starting with a fleet of six poorly equipped vessels, placed on the map the longest sea-coast yet known in Antarctica. Captain Nathaniel Palmer, of Stonington, with his dauntless Yankee sealers, set us a standard of Antarctic enterprise in 1821. Let us maintain it in the twentieth century.



R. C. M.

NOTES

The Index to the Museum News, volume 8, October, 1912 to May, 1913, unavoidably delayed, is now ready for distribution and may be had upon application to the Librarian.

For the benefit of museums and all institutions where commercial carbon bisulphide is employed for the destruction of dermestes and other insect pests, we offer the following account of a grave accident due to this chemical. On May 12, 1914, three of the Museum's attendants were fumigating, according to custom, one of the natural history groups in the central section of the building. The glass front of the exhibit was first removed and liquid carbon bisulphide sprinkled on the specimens within the case. The front was then replaced, and while it was being made fast with screws the vapor in the case exploded, detonating with such violence that a partition two hundred feet away and in another angle of the building was blown out of place. Several exhibition cases and many sheets of plate glass in the central section were wrecked. The three men employed in the work were injured by the shock and by flying glass, and one of them later succumbed to his wounds.

The explosion was followed by a fire which, however, was soon extinguished. A subsequent examination showed that the thick, fire-brick structure of two adjacent walls had been crushed in by the force of the explosion, and that small pieces of plate glass had been shot to a distance of three hundred feet.

An analysis of the chemical which caused the explosion proved it to be practically pure carbon bisulphide with a boiling point at 46.2° C. According to a recognized authority "An atmosphere composed of one volume of carbon bisulphide vapor to approximately 14.3 volumes of air is liable to violent explosion in the presence of fire of any kind whatever, or a temperature of about 300° F. without flame. We have here about the maximum danger point from explosion in the use of carbon bisulphide." In the present instance no flame could possibly have been communicated to the vapor, and the cause of the explosion, in default of a better explanation, has been attributed to electric lights within the case. These were vacuum lighting tubes enclosed within glass fronted boxes, and it is hardly conceivable that they could have generated an external temperature even approximating 300° F. According to the manufacturer of the chemical, however, the vapor has been known to explode when brought into contact with a steam radiator pipe.

The exhibit in which the explosion had its source was a habitat group of Bald Eagles, showing the adult birds and their young in a tree-top nest. The birds and accessories were collected in Maryland during the spring of 1911, and the group was both designed and constructed by Mr. Robert H. Rockwell, chief taxidermist in the Central Museum.

To the relatives of Mr. Eugene Kershaw, whose injuries caused by the accident of May 12 have proved fatal, the Museum extends its sincere sympathy.



The bald eagle group.



The site of the same group after the explosion of May 12, 1914.

It also wishes to express here its hope that a speedy convalesence to full health may be the fortune of Messrs. Fitzgerald and McLoughlin, the two other members of the force who were injured on the same occasion.

Record audiences attended the Museum auditorium during the week ending Saturday, May 2, 1914. On Wednesday, April 28, officers of the Brooklyn Bureau of Public Safety gave demonstrations, by means of charts, models, and motion pictures, of accidents due to carelessness. On Thursday and Friday of the same week the American Association for the Planting and Preservation of City Trees celebrated its fourth annual Arbor Day meeting in the auditorium. The attendance on the first day included four thousand children, several hundred of whom were necessarily turned away. The second day's attendance was only slightly smaller. Addresses relating to the active work of the Association were made by the Hon. George V. Brower, President, the Hon. Raymond V. Ingersoll, Commissioner of Parks, the Acting Director of the Museum, and others. On Saturday, May 2, an audience of eleven hundred persons attended a lecture on sea elephants by Mr. R. C. Murphy. In addition to lantern slide photographs taken on the Museum's South Georgia expedition, motion pictures of wild sea elephants were shown. The latter were lent for the occasion by a friend of the Museum.

The Museum expedition to the Bahamas, after six weeks in the field, returned early in July. The purpose of this expedition was to collect material and specimens to be used in the construction of a marine group representing a coral reef and its animal associations. In the accomplishment of this task many of the reefs at the islands of New Providence, Andros and Abaco were visited.

Land collecting further resulted in securing large series of mollusks, crustaceans, insects, etc. About two hundred photographs, illustrative of the activities of the expedition and showing characteristic features of the regions visited, also were obtained. Members of the expedition were:—Geo. P. Engelhardt, Curator of Lower Invertebrates, Antonio Miranda, Modeller, Silas C. Wheat, Conchologist. Work on the marine group will be commenced in the autumn.

Mr. Herbert B. Judy of the Museum staff has been on a sketching expedition to the Far West, visiting Gallup, Arizona, Glacier Park, Montana, and the California coast. He has made a large number of sketches which will be used in the work of museum installation. While Mr. Judy was in San Francisco he visited the grounds of the Exposition.

Mr. A. Augustus Healy, President of the Board of Trustees, returned from his annual visit to Europe on July 21st. Mr. William Henry Fox, Director of the Museum, arrived from Hamburg on July 2nd. He had been in Spain and Northern Italy with Mr. Healy, then went to Germany, visiting Munich, Stuttgart, Carlsruhe, Darmstadt, Frankfort, Cassel, Berlin, Hamburg and Altona.

Our Curator of Fine Arts, Mr. Wm. H. Goodyear, has returned from Europe and resumed museum duties on Tuesday, August 11th. The following notes as to the work done during his trip abroad have been furnished by him at the request of the editor of the Museum Quarterly.

Sailed February 7th, 1914; destination Egypt; arrived in Naples, Feb. 21st; Brindisi, Feb. 22nd, and Cairo, Feb. 25th. Spent one month in Egypt, devoted to studies in the Cairo Museum, visiting the important historic sites as far as Edfou, inclusive, and including ten days at Thebes. Most of the time was devoted to photographic work and taking negatives to be used in making enlarged photographs of the monuments for museum exhibition. Visits were made to Professor Petrie's camp at Illahun and to the camp of the Egypt Exploration Fund at Abydos. Sailed for Salonica and Constantinople on March 25th. Observations and photographs of refinements in the famous sixth century church of St. Demetrius at Salonica. Arrived in Constantinople on April 3rd; obtained permit from the Ministry of Cults (which had been previously refused —in 1903) for surveys and photographs in Sta Sophia and other Byzantine churches, now used as mosques. Twenty-six days in Constantinople, wholly devoted to photographic surveys and obtaining thirty-seven enlargements for museum exhibition (made in Constantinople).

Left Constantinople on April 28th for London and Dublin, by way of Vienna, Cologne, Aix-la-Chapelle and Ostend. Arrived in Dublin on May 12th. Three lectures on Medieval Architectural Refinements for the Classical Association of Ireland, in union with the Royal Institute of Architects and the Architectural Association of Ireland. Reception tendered by these associations and by the officers of the Dublin Museum of Science and Art. Dinners tendered by the professorial staffs of Trinity College and University College. Architectural exhibition loaned by the Brooklyn Museum, at the Dublin Museum, under the patronage of the Lord Lieutenant and other dignitaries. Exhibition opened by the Rev. J. P. Mahaffy, Vice-Provost of Trinity College. Special lecture for the professional staff and students of University College. On May 19th began making observations and photographs in the Dublin cathedrals (St. Patrick's and Christ Church—ten days' work). Results were published in all the Dublin daily newspapers, in the *Irish Builder*, *American Architect* and *Brooklyn Eagle*. Left Dublin for Chester on June 1st. Ten days' work in St. John's, Chester. Ten days in London preparing publication on St. John's, Chester, for the *Journal of the Royal Institute of British Architects* and the *Irish Builder*. This publication appeared in the *R. I. B. A. Journal* of July 25th and in the *Irish Builder* of immediately following date.

On July 3rd left London for Copenhagen to examine the Dreyer Collection of Prehistoric Danish Antiquities; eight days' trip. Returned to London on July 11th, having made stops only at Canterbury and Brussels, one day each. Between July 13th and August 1st (sailing date from Liverpool), observations and photographs as follows: Southwark Cathedral, St. Bartholomew's,

Temple Church and Westminster Abbey, London: cathedrals and churches of Canterbury, Winchester, Chichester, Salisbury, Exeter, Bristol, Gloucester, Tewkesbury, Hereford, Worcester, Lichfield, Hexham, Durham, York, Lincoln and Peterborough.

A Museum Library exhibit consisting of four charts was sent as a part of the American Library Association Exhibit to the International Exhibition of Graphic Arts and Book Industries held at Leipzig, Germany, from May to October, 1914. Its object was to show the relation of a museum library to museum work.

The relief maps removed from the Library corridor to make room for prints have been temporarily hung on visible storage in one of the corridors in the basement where they are accessible to classes.

In accordance with the Museum's policy of centralizing the print interests in the Library, the Pennell lithographs of the Panama Canal, which were formerly hung on screens in the Art Gallery, have been installed in room No. 1 of the Print Division. Simultaneously with the tapestry exhibit in the Art Galleries, April 8th to 26th, a supplementary exhibition of about 175 photographs and half tones of tapestries was made in the Print Gallery. Books on the subject were displayed on small tables at the same time.

An exhibit of Shakespearean prints was contributed to the Greater New York celebration of the 350th Anniversary of Shakespeare's birth during the last week of April. On May 23d, the date of the breaking of ground at the Plaza for the Parkway extension of the subway, an exhibit of large charts, pictures and plans showing routes, etc., was installed in the Library. To supplement art work with the high schools a poster exhibit which proved very popular was installed in the Print Gallery during June.

We quote the following from the May edition of the American Museum Journal: "In the May number of *Petermann's Mitteilungen*, appears the first chart to be published of the Bay of Isles, South Georgia Island. The map and accompanying article are by Mr. Robert Cushman Murphy, and represent a phase of the scientific work of the expedition to the Subantarctic Atlantic, conducted during 1912-13 by the American Museum of Natural History in conjunction with the Brooklyn Museum of Arts and Sciences. The chart is of further interest to friends of either institution because one of the great valley glaciers in the Bay of Isles has been named "Lucas Glacier" in honor of the director of the American Museum and another glacier is labeled "Morris Glacier" for the late curator of natural science in the Brooklyn Museum. A third is called "Grace Glacier" for the cartographer's wife, and the fourth and largest "Brunonia Glacier" for Brown University. "Point Bellingshausen" commemorating the Russian circumnavigator who made the survey of South Georgia in the year 1820, "Beckman Fiord," named for the Norwegian whaleman, and "Cape Woodrow Wilson" are among other localities which have been added to the map of the island.

The Bay of Isles was discovered in 1775 by Captain James Cook. For more than a hundred years it has been a harbor of much importance to sealers and sea elephant hunters at South Georgia. Recently it has been visited by whalers and by the Swedish Antarctic expedition, but no survey of its extensive fiords and numerous islets had been published until the present chart appeared."

The autochrome photographs of the Grand Canyon, which appear as a special feature in this number, were presented to the QUARTERLY by Mr. George D. Pratt. Because color plays so important a role in the grandeur of the gigantic gorge it is possible to convey even an approximate conception of this natural wonder only by means of color-reproductions. Mr. Pratt's photographs differ from most Grand Canyon pictures, moreover, in that they show considerable foreground scenery. Photographers usually choose the brink of the Canyon as the vantage point for their cameras.

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MAY 18 1915
MONTAGUE BRANCH

A COLLECTION OF ENGLISH GLASS IN AMERICA.

DURING the sixteenth century table glass in England was not an article of common use but a highly esteemed commodity of extreme fragility and very high price, which was mostly imported from Venice. The inventories of Henry VIII, in 1529, and of Robert, Earl of Leicester, in 1588, record large quantities of Venetian glass as having belonged to them. It is also known that in 1575 Jacob Verzelini, a Venetian glassmaker, obtained a patent for twenty-one years and set up a furnace in the Crutched Friars, Aldgate. To him are attributed three glasses that have successfully withstood the vicissitudes of time: two are in the British Museum, and the other in Windsor Castle.

Englishmen also undertook the manufacture of glass in their own country and at the beginning had to import raw material as well as skilled workers from Italy. Wood was the fuel used and the wasting of forests in feeding the furnaces brought numerous complaints that did not help the young industry. In 1615 Sir Robert Mansel, Vice Admiral and Treasurer of the Navy, a man of ability and determination, took, with eight others, a patent for the making of glass in coal furnaces, the process of which seems to have been invented by Thomas Percival.

Experiments had preceded and followed and by the end of the seventeenth century the English were making out of raw material, found in their country, and with local labor, glasses of clear, ponderous quality, of simple and harmonious lines, and at a price that soon enabled them to stop practically all importations of such articles into their own land. In 1696 there were no fewer than eighty-eight glass houses in England.

It is the Eighteenth Century Glass which is the subject of this paper. It has none of the fragility, nor the infinite



Plain Folded Domed Domed Folded

PLATE I—Types of Feet.

variety, of the Venetian product; it is seldom enamelled or gilded like the German glass; it differs also from the product of the Low Countries. It is a glass in a class by itself, graceful in form, good and solid in quality, and the poorer classes, who had been used to drink from horn, leather or metal vessels, could afford to buy it. The collecting of these relics began scarcely more than fifty years ago; their artistic interest, and more especially the fragility of the material in general, has made them rare. When, late in 1912, the Trustees of the Brooklyn Institute of Arts and Sciences purchased and presented the Museum with an English glass collection of 874 pieces ranging from the late seventeenth to the early nineteenth century, assembled in England by Mr. Leckie, they brought to America one of the finest documents of that interesting period for the given subject.

The collection is shown in twenty-four cases on the first floor of the Museum. The classification is the following: the wine glasses are exhibited in chronological order and are followed by the champagne, cider, ale and spirit glasses. Special glasses with inscriptions, decanters, tumblers, pitchers, mugs, colored glass bottles and flasks, and other objects for decorative purposes complete the collection. This paper will review the various objects in the order in which they can be seen.

The method of classification adopted is the one devised by Albert Hartshorn, F. S. A., in his monumental work "Old English Glasses," the finest book on the subject and also followed by Mr. Percy Bates in his "English Table



Drawn Bell Waisted Bell Waisted Ovoid



Straight Sided Straight Sided Rectangular Ogee Lipped Ogee Double Ogee

PLATE II—Types of Bowls.

Glass" which deals almost exclusively with the glass of the eighteenth century.

The main division, following the chronological sequence, is that of the stems. The earliest type is the Baluster, sometimes called moulded stem, although it does not appear to have been made in a mould. It can be dated as ranging from 1680 to 1730. The plain stem follows, approximately from 1700 to 1750. It was soon found that the inclusion of air bubbles in the stem developed an additional form of decoration; first of very uneven appearance and perhaps in some cases accidental, the bubbles became elongated and finally produced the third class, the Air Twist Stem, dating from 1725 to 1775. This variety is typically English and remained popular for a long time. There is a difference among air twists which can readily be seen at the Museum: in some of the stems the twist is exceedingly brilliant, almost silvery. This is the rarer type of the two; its process



PLATE III—Baluster Stems.

of manufacture is said to have been entirely lost. The fourth variety, the Opaque White Twist Stem, ranges approximately from 1745 to 1785. It embraces besides the opaque white twist, the mixed air and white (or other color) twist and the colored twist, all of which are represented in the collection. The last is the cut stem and may date from 1750. The dates mentioned above do not mean that the baluster stem began and stopped abruptly in 1680-1730, the plain in 1700-1750, etc. These dates are purely approximate: there is no doubt that glasses with baluster, plain or other kinds of stems, have been made after the dates mentioned. The making of opaque white twists in 1757 is recorded; the date 1758 has been found in a cut stemmed glass; but it was not customary to inscribe in a glass the date of its manufacture.

In the making of a glass piece the workman used an iron rod which adheres to the piece itself until it is finished when the rod is snapped off leaving under the foot a more or less rough and sharp excrescence called the Pontil Mark. In the last part of the eighteenth century this mark was polished away on the wheel but this is one of the last developments and seldom appears on others than the cut stemmed pieces.



PLATE IV—Miscellaneous Stems.

Modern manufacture has generally done away with this process but if the foot of the glass of that period had been as flat as it is now it would have been impossible in many cases, owing to the pontil excrescence, to stand the glass safely in its natural position. For that reason the foot was always somewhat conical, tapering upwards to the junction with the stem and this is called the "instep."

Four types of feet are represented in the collection: the most common is the Plain Foot, while the others are all early forms and their manufacture seems to have been abandoned during the first half of the eighteenth century. They are: the Folded Foot, so called because its edge was folded back, showing a distinctive band around and underneath the foot (the reason for this seems to have been to secure additional strength, as well as to prevent chipping), the Domed Foot and the Domed Folded Foot, all of which are illustrated on plate I.

The types of bowls are more numerous. The following division is that of Mr. Percy Bates, who supplemented Mr. Hartshorn's list. They are: the Drawn bowl (so-called because bowl and stem were drawn from a single



PLATE V—Air Twist Stems.

piece of glass, a style reminiscent of the seventeenth century), the Bell bowl, the Waisted Bell, the Waisted, the Ovoid, the Straight Sided, the Straight Sided Rectangular, the Ogee, the Lipped Ogee and the Double Ogee bowls.

The waisted form is not common, but the waisted bell bowl is very rare and appears to have been abandoned early in the eighteenth century. The bell remained in favor all the time. The straight sided and the ogee bowls are said to have been made only from the middle of the century. From Bristol originated the ogee forms, which were also made in other places. All these types are illustrated; see plate II.

Some of the pieces of the collection will now be described and a few of them are herewith reproduced. On plate III can be seen five specimens of the baluster stem type, three with folded foot, one with the domed and the other with the domed folded foot. The piece in the center contains in its stem a small silver coin of William III, dated 1701. This by no means proves that this glass was made in 1701; it cannot have been manufactured before that date,



PLATE VI—White Twist Stems.

but it may have been made much later. These five pieces are all of the early eighteenth century.

Plate IV shows also five specimens of the plain, drawn, moulded and incised stem varieties. The first from the left is a curious glass with a moulded bowl and a moulded domed foot of rather charming irregularity; the second is a waisted bell bowl with a plain stem and a folded foot, and the piece in the center is also a waisted bell bowl, but with an incised stem. The incised stem is very rare, and is said to have been found mostly in the west of England. It belongs to the earliest part of the eighteenth century, or possibly to the late seventeenth, and did not remain long in favor. The fourth is a drawn bowl with a slightly domed foot, and the last is a heavy straight sided bowl with a moulded stem and a plain foot. These also are eighteenth century pieces.

Belonging to the same period, but not illustrated here, is a certain number of plain stemmed specimens that can be seen at the Museum. Their bowls are engraved with various motives, such as sunflower, bird and basket of flowers, daisy, lily, grapes, rose, tulip, honeysuckle, and



Plate VII—Cut Stems.

sometimes a moth. The engraving is always of very fine quality and the arabesque exquisite.

A tall goblet is exhibited with these pieces; it is a late seventeenth century piece, somewhat moulded, with four silver coins in the stem. One bears the effigy of Charles II, dated 1679, and another of the same reign is dated 1681; a third belongs to the reign of James II, 1686, and a fourth piece dates to William III. On the same shelf with this last piece is a posset pot with cover, eighteen inches high, which also belongs to the seventeenth century. The cover is shaped like a crown and three seals are impressed in the glass; this is also repeated on the bowl.

On plate V are shown five specimens of the air twist stem variety. The first from the left is a drawn bowl with a remarkable twist of brilliant quality, and the next has a bell bowl with a knopped stem. The bowl of the third is engraved with a charming scroll decoration and it has an interesting stem. The two last are fine examples of the brilliant twist. Among many others of the same type in the collection, one must be especially mentioned; it is on a shelf in one of the cases. The foot is not attached to the stem,



PLATE VIII—Ale Glasses.

thus showing the step in the manufacture just after the stem has been made fast to the bowl. In this case the stems were first made in rods, cut afterwards to the desired length, while in the case of the drawn type, already mentioned, bowl and stem are of one piece and the foot is added.

Plate VI is devoted to the white twist stemmed glasses. Mr. Hartshorn has described the method of making these peculiar stems, saying that the workmen used a mould of pottery about three inches high and two and a half inches wide, which was filled with opaque white glass rods alternating with clear ones to keep them in position. The mould was then heated in the furnace to the melting point, filled with molten glass, and withdrawn from the fire. When the workman had removed the rod from the mould he would reheat the stick, stretch and twist it to the proper thickness, and afterwards cut it in suitable lengths for stem purposes.

The first piece shown in the illustration, starting from the left, has a somewhat ordinary twisted stem but is interesting in other ways; it has an ogee bowl impressed with four circular lines, a peculiarity which is said to have



PLATE IX—"Firing" Glasses.

originated in Norwich, where such types were made almost exclusively. Such specimens are very rare: four can be seen at the Museum with two, three, four and five lines respectively. The second is a double ogee, and the third a single one but with a bowl moulded in eight vertical panels, four of which, engraved with a motive of grapes and leaves, alternate with plain ones. This glass has decidedly charming lines and originally must have been part of a set, as the Museum has a few others of the same style but of smaller size. The fourth has a deeply waisted bowl and the last belongs to the variety of the colored twists, as the stem is not opaque white but of a pink color.

Another specimen, not illustrated herein, is worthy of special mention. It is exhibited among the white twist stemmed glasses and came from the Low Countries. The bowl is engraved by means of fluoric acid; the signature I. van Den Blyk and the date 1791 appear scratched in the glass with a diamond point. Glasses with this type of decoration are rarely met with. This process is said to have been started in Germany but was employed in England by English artists during the eighteenth century.

On plate VII are shown glasses with cut stems, dating from the latter part of the eighteenth century, with the possible exception of the first example which may belong to the early nineteenth. In this specimen differences in



PLATE X—Coaching Glasses.

detail are already apparent: the metal is much whiter in color, the foot is absolutely flat, the cutting is of great perfection. On the whole it is a very beautiful piece, but it lacks the quaintness of the other pieces. The second has a bowl engraved with a very fine carnation and a gilt border; the third is a double ogee with a knopped stem and a domed foot; the lower part of the bowl, the stem and the foot are also cut and polished. Domed feet are of rare occurrence among cut stemmed glasses. The fourth is a lipped ogee with a very interesting cut foot, and the last has a hunting scene engraved on the bowl. A certain number of champagne glasses can be seen in the collection: the flute and the wide ogee shapes are represented, but they belong mostly to the early part of the nineteenth century.

The majority of the glasses just mentioned and exhibited together at the Museum, are wine glasses; the remainder have different uses. Among these are the ale glasses



PLATE XI—Jacobite Glasses.

of peculiar type, a modification of the champagne flute. Those shown on plate VIII will give a good idea of the average shape. The first on the left has a very beautiful white twist stem and the bowl is decorated with heads of barley, and tendrils and clusters of hops in white enamel. While the enamel is an unusual mode of decoration the motive of hops and barley for ale glasses is very general and leaves little doubt as to the use of the object on which it is found. The second is a moulded specimen and the third a magnificent half-yard-of-ale, twenty and a half inches high, finely engraved with the usual hops and barley and the initials J. M. The fourth is a Norwich made ale glass, curiously moulded and of somewhat darker metal than the average, and the last has, in addition to the hops and barley motive, the name of the owner: M. A. Butler. There is also in the collection a yard-of-ale, unhappily damaged, but nevertheless interesting; it is about thirty-six inches long but holds hardly more than one pint. It has no foot and the base is shaped like a bulb, which adds to the difficulty of using such a vessel, since the liquid is not released unless the glass is held in an almost upright



PLATE XII—Williamite and Orange Glasses.

position. Other types are known, some with feet, but they are exceedingly rare, not only on account of their extreme fragility but also because they were used mostly as trick-pieces at dinners or other meetings where the quantity of intoxicants absorbed redounded to the greater honor of the guest.

On the plate following, plate IX, are shown five spirit glasses known as "firing glasses" because the thick, heavy base would withstand the impact on the table when brought down with a bang after the glass was emptied. It is said that, when the company was large enough, the simultaneous dropping of the glasses made a noise reminiscent of the shooting of a gun, hence their name—firing glasses. Spirit and sweetmeat glasses were of many different shapes and the visitor at the Museum will notice their varieties.



PLATE XIII—Rose and Cider Glasses.

Plate X shows another curious type of glass, with beautifully cut and polished stem but no foot. Before the advent of the railroads, when the coach stopped at a relay to change horses, there was little time to waste and the thirsty traveller did not go down to the inn. A servant would bring a tray with bottles and these glasses turned upside down. The drink selected was instantly served and the glass placed back on the tray in the same position. They are the coaching glasses; one of them bears the name of the "Royal Oak, Keswick." They are all of the early part of the nineteenth century.

Special glasses, with inscriptions and mottoes, of unusual shapes or styles of decoration, form a large part of the remainder of the collection. Those illustrated on plate XI are of peculiar interest. Eighteenth century England had a strong party which professed great devotion to the Stuarts. In 1715 a rebellion in favor of the "Old Pretender," Charles James Edward, the Chevalier of St. George, was not successful. Others followed and at his death the movement continued in favor of his son, the "Young Pretender." The Jacobite faith was long kept alive by certain associations, such as the Cycle Club, said to have



PLATE XIV—Inscribed Glasses.

been founded in 1710, whose motto "FIAT" can be seen on the larger number of the nineteen glasses owned by the Museum, which at one time were used to toast "The King Over The Water." They all are beautifully engraved. The rose with two buds, symbolic of King James II and the Old and Young Pretenders, appears on all of them and other symbols such as a star, oak leaves, thistle, or forget-me-not are often added. Some are engraved under the foot with various motives, one showing the Prince of Wales feathers and another with a magnificent rose and leaves completely covering the pontil mark. Besides FIAT there are other motives such as REDDAS INCOLUMEN, REDEAT, SUCCESS TO THE SOCIETY, AUDENTIOR IBO, etc. One of the illustrated glasses shows the portrait of the Young Pretender and there is another in the collection. He died in 1788 and his death ended all constancy to that long lost cause.

The Jacobite glasses are rare but even rarer are the "Williamite" glasses two of which are shown on plate XII, one with King William III, the "Deliverer," on horseback, with the inscription: "THE GLORIOUS MEMORY OF



PLATE XV—Inscribed Glasses.

KING WILLIAM." It is a drawn bowl, with a "tear" in the stem. The other, the first on the left, is a very fine specimen decorated with an orange tree and the motto: "EVER FLOURISHING." The glass shown in the center of the same plate is highly interesting; it is one of a pair and the Dutch inscription means "The growth and the blossoming of Orange." The upper knob in the stem has a red twist and it is probable that it was imported from Bohemia into Holland late in the seventeenth century. The engraving does not compare in quality with the English workmanship of the time; the lettering is decidedly irregular.

Two cider glasses are shown at the ends of plate XIII and the collection contains many more, all very beautiful and often engraved in a remarkable manner. The others on the same plate are glasses engraved with roses and dating from about 1720 to 1780. The rose was most in favor as an object of decoration during the first half of the eighteenth century and then the bunches of grapes and vine leaves became more popular. Those engraved with the rose and buds, sometimes also with the hovering bird or the butterfly, are not to be mistaken for Jacobite glasses.



PLATE XVI—Tumblers.

Most of the inscribed glasses of the eighteenth century were pieces made to be presented as tokens of friendship. Therefore it is not surprising that the two rummers shown on plate XIV are decorated with Nelson subjects. The one at the left shows a bust view of the national hero with the dates of his birth and death and of four of his victories, while the opposite side is decorated with his coat of arms and the motto: "ENGLAND EXPECTS EVERY MAN WILL DO HIS DUTY." The other is the "funeral" rummer; on one side is shown the catafalque with the names of his two great triumphs—Trafalgar and the Nile, and the funeral car on which it is placed is in the shape of a ship on which appears the name "Victory" (the admiral's famous flagship). The rummer in the center of the same plate is a most curious specimen. It is only five and one quarter inches high, of very simple lines, and is covered on both sides with two British coats-of-arms and the two following verses engraved with the diamond point:

May peace and plenty you each have in Mind
And may your life be sweetened by a Friend
May you in every wish most happy be
And when far distant think, oh think of me
And absent or dead a friend should still be dear
If absent drop a sigh, if dead a tear.



PLATE XVII—Toddy Fillers.

The other one is:

When friendship, love and truth are found
Among a band of brothers
The cup of joy goes gayly round
Each shares the bliss of others
Sweet roses crown the thorny way
Along this veile of sorrows
The flowers that shed their sweets to-day
Shall bloom again to-morrow.

A royal crown surmounts the initials G. E. B., while the under part of the foot is decorated with oak leaves and acorns. It is a very beautiful piece and may be an unusual Jacobite glass.

Plate XV shows three other rummers. The first from the left bears engraved a bottle, a glass and a corkscrew with the following inscription.

"*May you never want a Friend nor a Bottle to give him.*"

It is undoubtedly an eighteenth century piece; the next belongs to the earlier part of the nineteenth. It is a large rummer beautifully engraved in the intaglio manner



PLATE XVIII—Decanters.

with three motives of cattle, sheep and horses. The last piece shows a view of the Sunderland Bridge. Sunderland is a little seaport in the borough of Durham and had in 1795 no less than five shipbuilding yards. In 1796 a great cast iron bridge was opened across the river Wear. It had a single span of 236 feet and was 100 feet above low water. Glasses with such decoration were usually a sailor's love token, and others of different style can be seen in the collection.

On plate XVI are displayed three tumblers from the number that are shown at the Museum. The first is the tumbler of a freemason who belonged to the "Independent Order of Good Fellows," with the various signs of the sun, stars, moon, skull and bones, etc. The next is a large specimen commemorating the Coronation of George IV



PLATE XIX—Pitchers and Glass Stand.

and dates consequently from 1820. The monarch is represented standing, in a medallion with the following inscription: "MAY OUR HAPPY CONSTITUTION IN CHURCH & STATE EVER CONTINUE UNIMPAIRED" and below "CHURCH & KING." The third piece is an Irish tumbler very charmingly engraved to represent a young lass watering a sunflower on top of which is sitting a cupid.

There are five toddy fillers in the collection, all of which are illustrated on plate XVII. They seem to belong to the earlier part of the nineteenth century. These small decanter-shaped objects were used, as their name implies, to fill glasses from the punch bowl. Both extremities are pierced with a small hole. When the lower end was immersed the glass filled with liquid; to remove it the thumb was placed at the top, thus preventing the escape of the contents. The filler then was transferred to a glass when the thumb was removed and the liquid released. Each of these is said to have held a glassful.

Three decanters are shown on plate XVIII. All are of the early nineteenth century and the center one is a fine piece of Bristol make. There are also in the collection several bottles of square shape with a short neck and small mouth, labelled "Rum" which belong to the eighteenth



PLATE XX—Waterford Pieces.

century, and one marked "Claret" may be of the same period.

The glass industry in Ireland was necessarily closely related to that of England. It is known that a glass house was established in Dublin in the year 1670 or thereabout while the earliest record known of glass manufactured in Waterford dates from 1729 and in Cork from 1782. There were other factories at Newry, Ballycastle, Londonderry and Belfast. During the early part of the eighteenth century the industry was most prosperous, but in 1746 England passed a law levying a duty on the raw material, prohibiting the exportation of glass from Ireland (which was not removed until in 1780), and limiting the importation into Ireland from England. In 1797 a duty was placed on the finished article. In 1811 flint glass exported from Ireland became dutiable and in 1825 an additional duty was levied on the pot weight of the metal. This proved to be the death of the glass industry in that Island and by 1845 it had dwindled practically to nothing.

It may be noted of the pieces of Irish make in the Museum that the Cork glasses are exceedingly clear and



PLATE XXI—Waterford Pieces.

brilliant, while those of Waterford have a slight blue tint, but the cutting of the latter is of unusual beauty.

On plate XIX are displayed two very fine pitchers and a glass stand which together with the piece at the right are of Cork make. The three bonbon or sweetmeat glasses and the candlestick shown on plate XX, were made in Waterford, as well as those represented on plate XXI, which are an oil cruet, a sugar bowl, and a tall sweetmeat glass. There are many other specimens of Irish origin at the Museum.

In the matter of types the collection is not limited to the few illustrations shown here, but displayed on the shelves are many other articles of common and uncommon use such as wine glasses of green and red colors, paperweights with the multicolor flowery ornamentation which was still

in favor not so many years ago. Glass canes and glass swords of purely ornamental use, also are exhibited.

Although we cannot mention all such pieces in detail, a few deserve special attention. A large blue glass plate with gilded decoration, and of Bristol make, is signed on the back: "Jacobs Bristol." Several old bottles of dark green glass and of the most pleasing simplicity of line are to be noticed; one is dated 1727 and the initials C. R. L. appear on the seal; another is dated 1793 and bears the name C. Ellis. One of pale blue green glass is very thin and is said to date from Elizabethan times; the metal, full of air bubbles, shows that its maker was not well acquainted with the making of glass, as it takes about fifty to sixty hours to drive off the air bubbles from the pot and obtain a homogeneous mass.

A certain number of glass rolling pins is included; these were primarily of sentimental significance, but may have been of some use. They were the parting gift of the sailor to his lass and their gaudy decoration is sometimes supplemented with some appropriate verse, such as:

Be wise then Christian while you may
For swiftly time is flying,
The thoughtless man who laughs to-day
To-morrow may be dying.

This rolling pin has a silk cord for suspension.

A certain number of flasks, decanters, bottles and miscellaneous objects of spotted glass, of Nailsea and other makes, also is displayed. Opaque white glass pieces of Bristol manufacture, apparently made to imitate porcelain, are worthy of notice. They are exceedingly rare.

In general, Eighteenth Century English glass appears heavy, especially when compared with the Venetian product of the same period. It has, however, great brilliancy (it was spoken of at the time as being as "clear as crystal"). Its quaint and homely charm grows more and more fascinating with intimate study. A.E.R.



OGDEN WOOD, A BROOKLYN ARTIST.

OGDEN WOOD was born in Brooklyn, in 1852. He was the son of Joshua Wood, whose marriage united the Ogdens and the Woods who had lived near Brooklyn for many generations.

Thrown on his own resources at the death of his father in 1870 (?) he found employment as a draughtsman for an agricultural journal. A slight incident changed his career. The elder Cornelius Vanderbilt called for an artist to draw one of his favorite horses, and wanted it at once. In the absence of the man to whom such a consignment would have been given, Wood was sent. His work was pleasing to the old Commodore and Wood was from that time frequently called to draw and paint the famous horses of the Vanderbilts, Frank Work and Robert Bonner. Sent to Kentucky to paint on the stock farms, he accidentally saw a painting of Van Marcke and recognized at once the master of his dreams. From that day he saw his ideal and followed it.

In 1874 he arrived in Paris but hardly had settled to work when the failure of Jay Cooke & Co., who held his resources, upset all his plans and he had to borrow money to pay his return passage to America. The prompt return of this borrowed money to Mr. George Lucas was the beginning of an intimacy of friendship which lasted until the death of Mr. Lucas in 1909 (?) or 1910.

For four years after his return he worked to accumulate funds with which to return to Paris in 1878. At this time he made so earnest an appeal that the great master of animal painting, Emil Van Marcke, contrary to his usual habit, granted Wood permission to submit his sketches to him for criticism. His youthful ambition led him to endeavor to paint too early in his career that most difficult subject—a white cow. One day he showed his study to the master, who looked at it, put it on the floor, face down,

scraped it to and fro in the dust with his foot, took it up and remarked: "Now it looks better!" From that time Wood worked more modestly and more efficiently.

Van Marcke spent his summers at his chateau St. Blanay in Normandy, where he allowed Wood to paint in his atelier and watch his work and bring his sketches for criticism. After a time—somewhat discouraged by the conscientious criticism of the master—Wood asked him if he thought it were worth while for him to continue his efforts to become an artist. The master replied that it would be a pity for one with such an eye for color to cease trying to perfect himself in his career, but told him he must study hard and paint every sketch as carefully as if it were a finished picture: that every stroke of his brush must be serious.

From that time Wood ceased to care for the Bohemian life of the Latin Quarter and sought to reach the limit of his talent. He did this not only by means of the actual work on his easel but by cultivating his mind and his character. In his studio on Montmartre, which he occupied for thirty-three years, he spent his evenings and dark days reading the English classics or writing reviews of the work of artists of his school and in working at compositions for pictures.

The summers he spent in Normandy working in the open air. As long as Van Marcke lived Wood had his counsel. The studies made in the fields fill many sketch books and he criticized his own work unsparingly in notes against his drawings.

Back in Paris he worked up the material gathered in the summer. When the light failed he wandered among the print shops and stalls and gathered a remarkable collection of print etchings and lithographs of the works of his masters in the Barbizon school. He was in the habit of saying that in Art, Van Marcke was his father and Troyon his grandfather. His collection of reproductions of Troyon he claimed to be complete with the exception of one piece only, which for years he sought to obtain. His collections of the repro-

ductions of Rosa Bonheur, Mauve, Corot, Jacque and Van Marcke are of great value, and the collection of Annual Catalogues of the Paris Old Salon where he exhibited for many years, comprises thirty-five years. His library of English and French works on contemporary art is interesting and valuable.

He disposed of his pictures through dealers, with the usual result that he gained little compensation. The lack of commercial experience, too common, alas! with artists, was his portion and he labored hard for little money. But no lack of money return could daunt him. He had plenty of example in the artists of his school who had labored and seen others gain the fruits, and so he never wavered in his determination to paint for the future and to the best of his ability on every canvas, whether study, sketch or finished picture. So he painted very few pictures and was reluctant to let a picture leave his studio until it reached his exacting standard.

Gradually he found a coterie of clients who gave him direct commissions, and during the last fifteen years of his life he sold direct to these friends in St. Louis, Chicago, Boston, Providence, Detroit, and elsewhere. But his work was finished so slowly that he gained little more than enough to meet his simple requirements and provide for a few years of rest and the proper care of his remains.

That which sustained him—happy, undaunted thru over thirty years, was his devotion to a high ideal. In character he was a man of few friends but he was loyal and devoted. He was very sympathetic with the young Americans who came to study Art in Paris. As a leading member of the American Society of Artists in Paris, he taught them and gave them criticisms freely. As a member of the International Jury for the Paris Exposition of 1904, he was so disturbed by the favoritism which gained to a clique of Americans all the best treatment that he left the Society in disgust, and suffered much from his action, but never ceased to uphold and defend the young American Artists.

He served on the International Jury for the St. Louis Exposition and received a silver medal for his picture "Normandy Heifers."

His pictures are in the Art Museums of St. Louis, Chicago, the Mar Collection of Detroit, the Corcoran Gallery, Washington, and the Buffalo Art Museum.

In 1911 his health became impaired and a slow but fatal affection which developed ended his life on the 13th of September, 1912, in Paris. His remains were brought to this country and were placed beside his mother in Sleepy Hollow Cemetery, Tarrytown, New York. R. M. A.

BOTTLE-NOSED WHALES ON THE LONG ISLAND COAST.

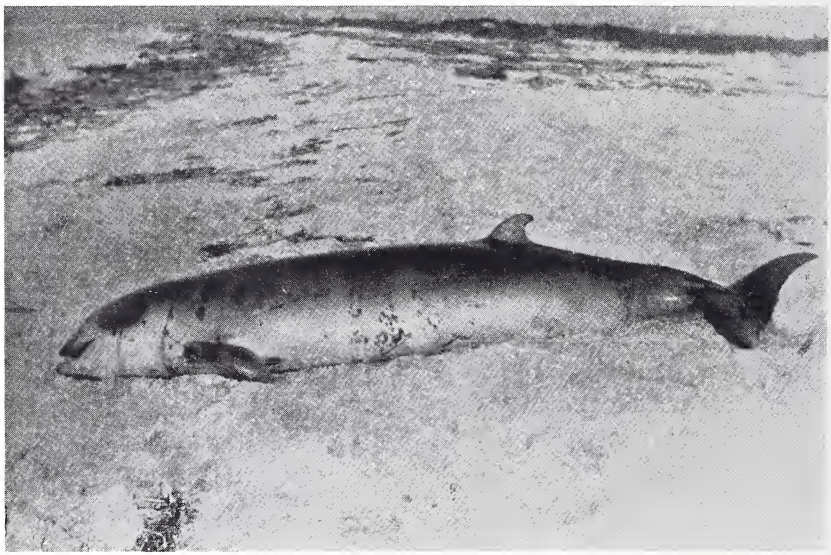
THE appearance of three bottle-nosed whales is not a very common sight, especially to visitors at a crowded summer resort near New York City. On August fifteenth, however, three such ran ashore at Long Beach, Long Island. Two of them were promptly secured by the life guards who notified the Museum of the catch, with the result that plans were immediately formed to despatch a collecting party from the Museum.



The adult female bottlenose whale.

The fact that this trip was the writer's first experience in this particular kind of collecting added enthusiasm for the work. We arrived on the scene at four o'clock in the afternoon of the fifteenth and began operations immediately. The whales had been washed up broadside on the beach and lay half embedded in the sand. Before starting the actual cutting, measurements were recorded which gave the total length of the larger whale as 17 feet, 6 inches, and of the smaller as 8 feet, 3 inches. The next step was to obtain

photographs, which were taken hurriedly in view of the fast failing light. The tide was now running high and threatening to rob us of our prizes, which were not at all securely fastened. So, with the aid of three life guards, all armed with large knives, we set to work dissecting the larger whale. Having removed the entire upper portion of the body, which lay exposed above the sand, we dug down and inserted long poles which were used to pry up the carcass. This tended to stretch the cartilage between the vertebrae and enabled us to disjoint the backbone.



The young whale.

Severing the animal into sections we subsequently dragged the parts up the beach to a place of safety, out of danger of being reclaimed by the tide. The operation of cutting the greater part of the flesh off the bones, though tedious and somewhat unpleasant, was continued with less anxiety than the securing of the specimens; and, in view of the fact that the whales were freshly caught, we were little annoyed by unpleasant odors which would have proved disagreeable some hours later.

It is not surprising that while we were deeply engaged in preparing the specimens, hundreds of people from the nearby resort visited the scene of operations and naturally asked many questions. I did not at first resent this as their queries showed interest in our work, but when they became



Blowhole of the adult whale.

too numerous I decided that it would be necessary to adopt some measures to prevent interference with our work. So, one of the spectators who appeared to be the most interested and who had lingered about longer than any of the others, was selected as spokesman. I made it a point



Head of adult male bottlenose whale. (After D. Gray).

to impart to him all the information I could muster concerning the habits of whales, and the disposition at the Museum of the two on hand. Then when a question arose it was only necessary to point to the spokesman—our Bureau of Information as we called him.

Taking a mould of the smaller whale was carried on under some difficulties. Plaster of paris and fresh water had to be carted three miles, but we were fortunate in obtaining a good impression which, in the end, repaid us for the effort. The remainder of our stay at the beach was occupied in the construction of crates and the packing of the spoils. It was with considerable weariness but much satisfaction that I obtained my shipping receipts and took the train back to the city. R. H. R.

A NOTE ON THE BOTTLENOSE WHALE.

Mr. Rockwell's account and photographs of the bottlenose whale, *Hyperoödon rostratum* (Müller), are of particular interest for they constitute the first local record for this species of whale since the year 1822 when, according to DeKay's 'Zoology of N. Y.' (1842), a female specimen eighteen feet in length was captured "in the lower bay of New York." In DeKay's work there is also a more or less unrecognizable lithograph of the species.

The bottlenose is a North Atlantic whale inhabiting the breadth of seas between Spitzbergen and Davis Strait, migrating southward about mid July. On its wanderings it is known to frequent the coasts of America and Europe and also to enter the North Sea and the Mediterranean. The animals are said to travel in groups of from two to fifteen individuals, and not infrequently pairs of them, especially females with their calves, have run ashore on the beaches of England and elsewhere. Since these whales are said to refuse to leave a wounded comrade, doubtless the stranding of a young calf causes the mother also to run helplessly aground.

Bottlenose whales are credited with the ability to remain under water as long a time as two hours. They can also leap clear out of the water, entering again gracefully, head first. They are unsuspicious and fearless, often gathering about a boat. In common with several closely related whales the bottlenose is known to have a distinct voice. It is said to "sob."

Males of the species are sometimes thirty feet long; the females are smaller. The sexes differ, moreover, in the shape of the head, old males having huge maxillary crests on the skull which push out the blubber of the forehead in the form of a great blunt plate. In color these whales grow lighter with age. The young are black above, older animals being light brown. The adult female captured at Long Beach is curiously spotted as may be seen in the photograph. The third Long Beach whale, which escaped, is described as having been nearly white, an observation substantiated by a recent authority who writes: "Very old animals turn a pale yellowish with white about them." The under surface is usually grayish white, but our Long Island photographs show the captured adult to have been mostly dark below, with white blotches on the belly and flanks. Bottlenose whales are practically toothless, a pair of minute teeth at the ends of the lower jaws being buried in the tissues. The food of the species seems to consist exclusively of small cuttlefish.

The blubber of this whale makes an oil resembling sperm oil, but possessing even greater lubricating power. An average male yields over two thousand pounds of oil which contains about five per cent of spermaceti. The Norwegians have conducted a regular fishery since 1882, principally during May, June and July, in the waters about Iceland and Jan Mayen. It is estimated that two thousand of these whales were killed in the season of 1903.

An unborn bottlenose calf ten feet long has been taken from the body of a

mother twenty-nine feet long, from which we may conclude that the Long Beach calf, with a length of eight feet three inches, was only a few days, or perhaps hours old. Probably the reason why these whales leave the northern Atlantic abruptly in July is to give birth to their young a month later in warmer seas. The same phenomenon has been observed of other whales.

The photographs show very clearly a number of the morphological characteristics of the bottlenose whale, as follows:

1. The single, median, crescentic blowhole, like that in the porpoise family.

2. The small, obtuse dorsal fin, placed well behind the middle of the back.

3. The peculiar tail which is not notched as in most of the whale kind but is rounded along the hinder edge. An unpublished photograph shows that the edge of the adult whale's tail had received an injury, which accounts for the lobulated appearance of the left fluke.

4. The two conspicuous grooves of the throat. These show distinctly in the full length view of the adult, and might easily be mistaken for the animal's mouth. In reality the lower jaw projects slightly beyond the upper.

5. The marked constriction of the neck. The bottlenose whale is known to be able to move its head about freely. This characteristic, however, is shared by other species more generally than was formerly supposed. The captive porpoises (*Delphinus*) in the New York Aquarium turn their heads from side to side and up and down with the greatest freedom, and even throw dead fish from one to another by a jerk of the neck.

R. C. M.

NOTES

The death of Professor Franklin W. Hooper at Walpole, New Hampshire, on August first marked the passing of one of Brooklyn's foremost and most public-spirited citizens. The birth of this Museum in the early 90's was due largely to his initiative and with its important educational influence it is a monument to his broadness of mind and his zeal.

Together with the University of Pennsylvania, the University of Chicago, and Cornell University, this Museum subscribed to the Egypt Exploration Fund by means of which extensive archaeological excavations were made during the winter of 1913-1914. The findings of this year were unusually rich and have been distributed among the subscribers to the Fund. The Museum's share of the material secured by this Expedition in the region of the Ibis Cemeteries at Abydos and at Sawama will prove a valuable addition to our collections of Egyptian antiquities.

The Children's Museum, the Brooklyn Botanic Garden and this Museum will make a combined exhibit of photographs illustrating the activities of these institutions for the New York City building at the Panama-Pacific Exposition. A set of the publications of the Museums and of the Botanic Garden will form part of the series of institutional publications among the educational exhibits of the city of New York.

The gallery of modern European paintings was re-modeled and re-opened about the middle of October. The gallery now is divided into a series of alcoves where the works are arranged according to national schools.

Among the recent additions to the Museum's collections in the Department of Fine Arts are the following: "Christ sitting in Judgment," a painting by Burne-Jones, two stained glass panels from the region of the Rhine and a painting, "Landscape," by Theodore Robinson, gifts of George D. Pratt; and a collection of Favrile glass by Louis Tiffany, the gift of Charles W. Gould.

The interesting collection of ninety-seven French, German, English, Swiss and Italian watches, dating from the Sixteenth to the early Nineteenth Centuries, has been loaned by Willard H. Wheeler. An interesting example represents a human skull with Latin quotations and signs which refer to time and death. Inside the lower lid is engraved a scene representing the death of Christ. This watch was made by Johann Maurer in Germany about 1625. Another interesting watch is of Italian origin dating 1550 and, with the exception of the main spring, is made entirely of ivory. The upper and lower surfaces of the case are richly carved with scenes representing the birth and the crucifixion of Christ. That one of the watches in the collection is an example

of the early work done at Nuremburg is shown by the representation of the sun in the center of the front cover. The case is made of gilt bronze and is engraved with signs, symbols, and mottoes in German, Latin and Hebrew, all relating to religion and time. On the back of the case are symbolic representations of events connected with the crucifixion of Christ. Experts have agreed that this watch was produced in connection with a sacred religious sect known as the Cabalists.

Many of the Eighteenth Century watches have beautiful enamel cases and several have musical attachments with movable mechanical figures.

In the Department of Natural Science gifts have been received from the New York Zoological Society; A. C. Weeks; New York Aquarium; New York State Museum; L. A. Hamill; George P. Engelhardt; R. C. Murphy and A. E. Rueff.

The Department of Ethnology is indebted to George D. Pratt for an interesting collection, among which are Japanese sword ornaments and a number of valuable early maps, and to Herman Stutzer for a Chinese statuette of the Virgin Mary and a Chinese bronze mirror.

The winter's work between the Docent and the public schools is fairly under way. Since the re-opening of the schools the attendance at the Museum of regular classes in school hours has been more than three times the attendance for the corresponding period last year. A new phase of this work consists of placing in the schools for a limited time pictures of paintings, sculpture and other exhibits in the permanent museum collections. So great has been the response among the pupils as evidenced by their enthusiastic use of the Museum that this phase of our work has passed from the experimental stages and has become a strong link in the chain of cooperation.

An exhibit showing "How Prints are Made" has recently been installed in one of the small rooms of the Print Division where it attracts the careful attention of many visitors. It is arranged in panelled wall cases and shows simply and directly the various processes of the graphic arts. In succession appear a woodcut from the pen and ink sketch to the finished print, including the wood block. In contrast is shown the incised copper plate from which an engraving is made, as well as the print itself. A "steel engraving" and the plate from which it was printed come next. Etchings, "dry points," bitten and "soft ground," together with the original copper or zinc plates, as well as etching needles and other tools, occupy two or three panels. The mezzotint and how it was produced are shown, as well as a lithograph and a lithographic stone. The aquatint process completes the series. The tools used are shown in every instance. The exhibit will continue until further notice.

A vertical file of pictures on the Fine Arts, Natural Science and Ethnology, the Museum subjects, has recently been started by the Library. This has been prepared in response to numerous requests for pictures to circulate to schools and study clubs. The pictures have been cut from magazines, discarded books and other sources and mounted on inexpensive but pleasing mounts. One size, 9 x 12 inches, is suitable for passing from hand to hand, and the other, 20½ x 17 inches, for schoolroom decoration. They are very accessible as the mounts are arranged in drawer cabinets where they stand on end like catalogue cards in a tray, each mount labeled in the upper left hand corner with the name of its subject. The file now numbers nearly 3,000 pictures.

A group of about 125 wood engravings by the late J. H. E. Whitney has been purchased for the Print Division. Mr. Whitney is a representative of the period of American wood engraving, before the introduction of photographic processes. He was for years a resident of Brooklyn, as was his brother, Elias J. Whitney, the artist. His engraving of George Eliot was the frontispiece of the first number of the Century Magazine. These proofs made from the block by hand, of which only four or five were usually pulled, speak eloquently of an art that has almost vanished.

Gardiner D. Matthews of A. D. Matthews' Sons has presented to the Library 20 large marine charts.

Among recent accessions to the Library is a complete set of the Connoisseur magazine.

The lectures given at the Museum under the auspices of the School Art League were "Stained Glass—Ancient and Modern" by Frederick S. Lamb, and "Rosa Bonheur—Painter of Animals" a lecture for elementary pupils by James Parton Haney.

The third annual exhibition of the Brooklyn Aquarium Society, comprising goldfish, tropical fish, balanced aquaria, terraria and aquatic plants was held at the Museum on September 25th to 27th. The attendance during the three days totaled 9,389.

Work on the superstructure of the new wing of the Museum building has been resumed and is nearing completion. As soon as the contracts for the interior finish of this section have been authorized by the city, the Museum may look forward at an early date to additional space for exhibitions which will be practically double its present capacity.

For use in the Auditorium a Powers 6-a cameragraph has been given by Nicholas Powers.

THE BROOKLYN MUSEUM QUARTERLY

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THE FORMATION OF FRENCH DECORATIVE ART AT THE COURT OF THE PLANTAGENETS

THE ART OF THE TWELFTH CENTURY AS DISTINGUISHED FROM THAT OF THE THIRTEENTH

SPEAKING of architecture, it has been said: "The 12th century prepared the way and the 13th century set the seal of perfection upon it." This statement, if it includes stained glass and mural decoration, is in conflict with the judgment of serious critics.

Long ago, de Caumont wrote of "The 12th century, an incomparable epoch, when all blossoms as in spring, when all is brilliant and modern." Two of the best known specialists on the thirteenth century, Mr. Louis Gonse, and Mr. Emile Male, admit that the stained glass of the thirteenth is not so fine as that of the twelfth century. It had lost in value about 1220, and by 1250, the early type is ended.

Mr. Henry Adams, the American author, in his book "Mont St. Michel and Chartres" writes as follows concerning the West Portal of Chartres cathedral, which dates from the middle of the twelfth century:

"The portal is the type of French doors, it stands first in the history of Gothic art; you will see no other so complete and so instructive." Of the glass, he says: "Mr. Viollet-le-duc and Mr. Paul Bertrand, the French Government expert, are positive this glass is the finest ever made, that the northern lancet stands at the head of all glass work whatsoever."

Evidently then we have in the glass and sculpture of the twelfth century an art which is not merely preparatory.

The error probably arose from including the arts of decoration in the history of the architecture of the Ile de France, whereas in reality they grew up independently of it. In the Ile de France, a small district north of Paris, from 1110 onwards, a type of building evolved which resulted in a new style, adopted first at the Abbey Church of St. Denis, and afterwards in the cathedrals of Paris, Laon, Noyon, and Senlis. After the extension of the French Kingdom 1203-1208, this style spread by a prodigious movement far and wide. In this tradition the great cathedrals, as Amiens, Rheims, and Rouen were built, and they have come to be regarded as French architecture *par excellence.*

The glory of these works has hidden from view earlier forms. The fact has been obscured, that the art of glass painting was in use in the eleventh century, that it continued to develop in conjunction with Romanesque architecture, and was incorporated later in the new art of the Ile de France; in the development of this art it was possible not only to utilize much of what the twelfth century provided, especially the stained glass, but even to make a larger place for it. But as the quantity increased, the quality decreased, as the earlier tradition was lost to view.

How this twelfth century art of decoration arose, and how it came to be of such excellence, we now seek to inquire.

THE REMAINS OF ART TO BE EXPLAINED ONLY BY HISTORY

One of the salient features of the nineteenth century, is the birth of a retrospective habit of mind, along with an analytic spirit. This, applied to art, was a new departure. Previously, each generation had produced new forms of art by the modification of a preceding tradition; now men examined the past. From this sprang the science of archeology, and the creation of museums for housing and grouping the

remains of past ages. Whatever the present appreciation of art may be, no ancient art is neglected.

Yet with all this, we hear reproaches. The French decry the "pastiche," or the reproduction of ancient forms of art, and "archeology" is sometimes attacked as pernicious.

This can mean only that the study of art may be partial; there can be too much mere digging and collecting. The result may be an accumulation of undigested facts, because the sympathetic element has not come into play and because the analytic habit of mind has been separated from esthetic enjoyment.

The remedy surely is not to discard the study of the past, but to study it so as to create *a new archeology*, wherein is comprised the life of man as revealed in his works.

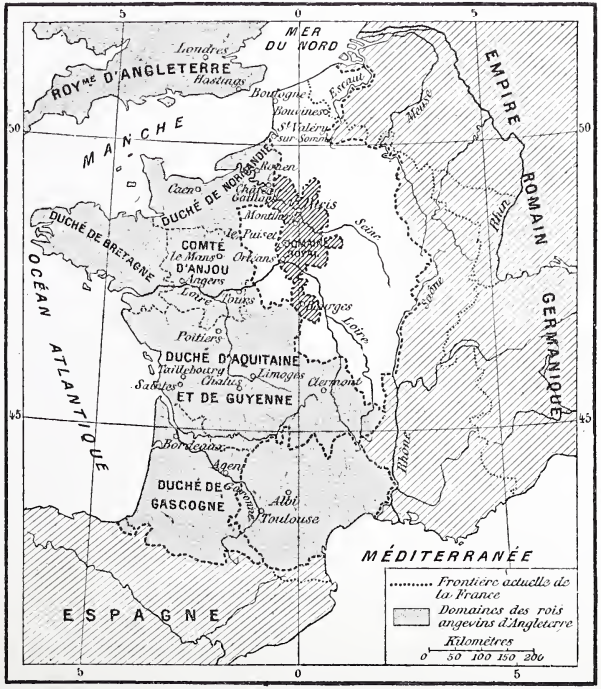
If, to the remains of the past in stone or glass, we add an interest in history, then history becomes real, and the remnants glow with the poetry of life. Such a method of study communicates energy; we are inspired to act, and make the world more interesting and beautiful in our own time.

It is in this spirit that we now evoke the twelfth century at a point where our active modern life is evolving a new phase of art.

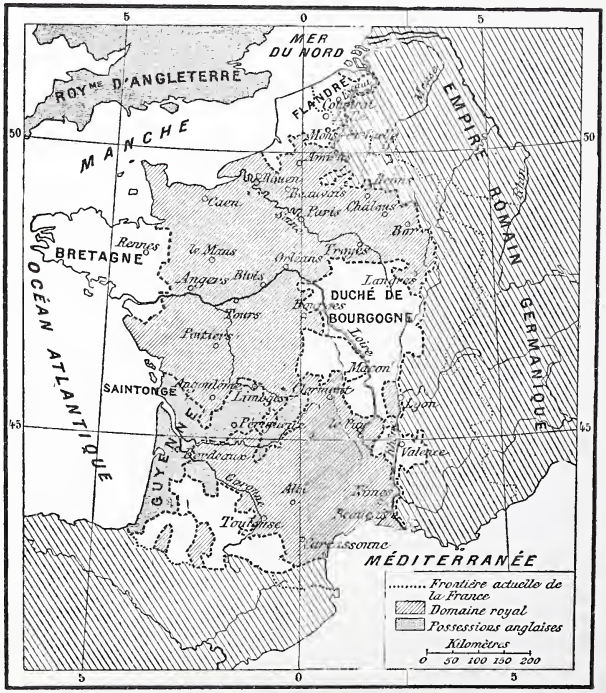
THE IMPORTANCE OF THE ANGEVIN EMPIRE

The historian Freeman has written somewhere, that nothing is more neglected than political maps, and that without them it is impossible to realize how things stood in the middle ages.

During the twelfth century, the Royal domain, or the Kingdom of France existed, but the political union of England and Anjou was much stronger and larger, as the annexed map from Malet's History of France in the Middle Ages, clearly shows. Normandy and England had been united first, then Anjou, Maine, Touraine, and Aquitaine were added. Paris meanwhile was only the capital of the small Kingdom of France, the abbey of St. Denis being



LE DOMAINE ROYAL ET LES POSSESSIONS DES PLANTAGENETS.



LE DOMAINE ROYAL A LA FIN DE LA DYNASTIE CAPÉTIENNE.

Comparison of the Plantagenet possessions with the small Kingdom of France in the middle Twelfth Century, and the later extension of the French Kingdom by absorption of surrounding territory in the Thirteenth Century.



Anglo-Saxon carving from Warwickshire, dated 1100.

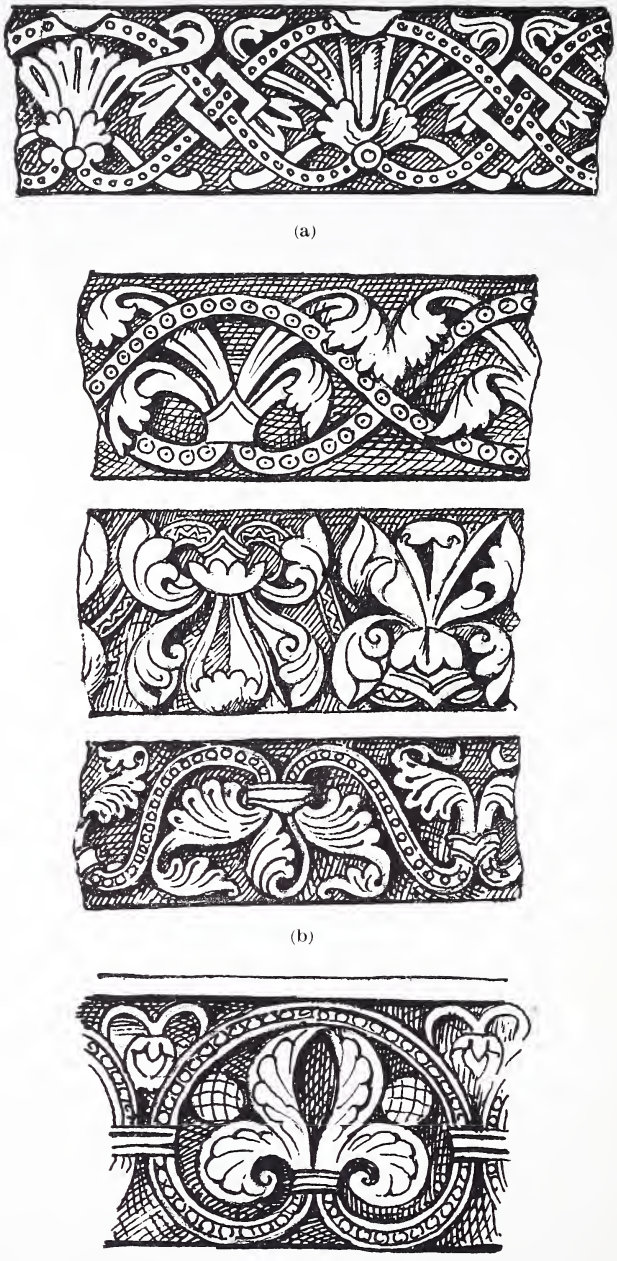
its royal sepulture. Le Mans was the important city after 1131.

The importance of Le Mans came about thus: About 1100 it was in the strong hands of Fulk V of Anjou. He married the heiress of Maine, and thus awakened the jealousy of King Henry I of England, who also was Duke of Normandy. War ensued between them, and Henry was worsted. A marriage between the two houses healed the breach. In 1129, the son of Fulk V, Geoffrey the Handsome, married Matilda, daughter of Henry I, King of England, and she went to Le Mans to reside, thus connecting Le Mans with the culture of Germany and England, as described later.

To this must be added a further remarkable fact. The Count of Anjou, Fulk V, then went to live in Jerusalem, leaving his son Geoffrey as Count in his stead. And so a third relationship was created between Le Mans and the East, bringing oriental ideas and examples direct to Le Mans.

All this had happened when, in 1134, a fire led to extensive work for the cathedral of Le Mans.

The year before, to Geoffrey Plantagenet, had been born a son whom they called Henry, perhaps after his grandfather the king of England. His mother Matilda had been



(a)

(b)

(c)

Showing similarity of treatment among: (a), a typical example of Anglo-Norman stone carving, from Southrop, Kent; (b), three designs carved on the abaci of the capitals in the portal of Le Mans; and (c), carving on a capital of St. Martin des Champs, Paris.

recognized as Queen of England, but had not been crowned, but her son became king in 1154 under the name of Henry II. Thus it was that Anjou and Maine were united to England and Normandy.

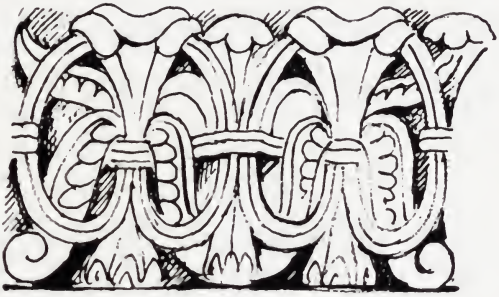
The young king had married Eleanor, Queen of France and Countess of Aquitaine, and from this marriage resulted, after 1152, the union of Aquitaine and Touraine to Anjou, Maine, and England.

ADVANCE IN MODERN ARCHEOLOGY

It is impossible to understand the art of the twelfth

century in France, if one looks at it from the point of view generally taught concerning the progress of art in the middle ages.

In a recent work on architecture, it is affirmed, that Romanesque "based on the Roman, came in the end to be a new and independent art. . . . the prevailing characteristics of the style were at first essentially Roman . . . Rome soon recovered her antique prestige as the leading European city, and Roman monuments covering the soil of Southern Europe were a constant lesson to the builders of that time."



Wood carving, Sauland, Norway.



Lincoln Cathedral.



Canterbury.



Hereford Cathedral.

Anglo-Norman and Scandinavian carving.

This view of the nineteenth century now has been discarded in Europe, and should have disappeared in current writing, as it is in contradiction to recent works, which sufficiently establish that for a long period Italy and Rome were under Byzantine influence, to which all Western Europe was subjected, however much it may be true that some slight tradition of building was due to Rome. The latter had become a provincial town, and Europe looked to the new

Rome in the East as its representative. While it is true that in Provence Roman models were copied, yet in the nineteenth century men looked at French Mediaeval art with minds accustomed to eighteenth century philosophy, and with ignorance of many facts. The Goths, Franks, Lombards, Burgundians, and others who held all Europe in their hands for centuries, were supposed to have had no art, and to be merely destructive. Ignorance of the real origin of Mediaeval art led men to see in it but a crude departure from the Roman ideal, and they regarded the "Renaissance" as a glorious return to the pure source of what had been debased.



From the Portal of Le Mans.

It is now known, to all who follow modern thought, that these Northern peoples brought with them an Oriental tradition of design, and a love for polychromy, which produced works of interest in the countries they inhabited, from the Caucasus to England.

The Lombard, Frankish, and Anglo Saxon Arts are all interesting.

Again, the Byzantine court was directly in touch with Persia, and through this centre, as well as directly from Syria, came other Eastern ideas and traditions, which reached all Europe. In this light, all that we find in the twelfth century in Western art assumes a new interest, and becomes an intelligible demonstration of an ideal complete in itself. Mediaeval art was not a debased form of Roman art, but something distinct.

M. Salomon Reinach, Professor at the Ecole du Louvre, wrote in 1904, "To conclude, the principle of Mediaeval architectural art is less a development, than an elimination of Greco-Roman elements, under the double action of Asiatic and Byzantine art and of the Barbaric temperament." (Apollo p. 108.)

TRADITION IN ART

In every land and in every century it is seen that men did not invent new forms without a basis upon which to work. It is found that one locality has borrowed systematically from another, one age from the precedent, and that invention has taken place within narrow limits. All ancient art is thus united in origin, but everywhere with incessant modification, so that no one piece of work is exactly like another.

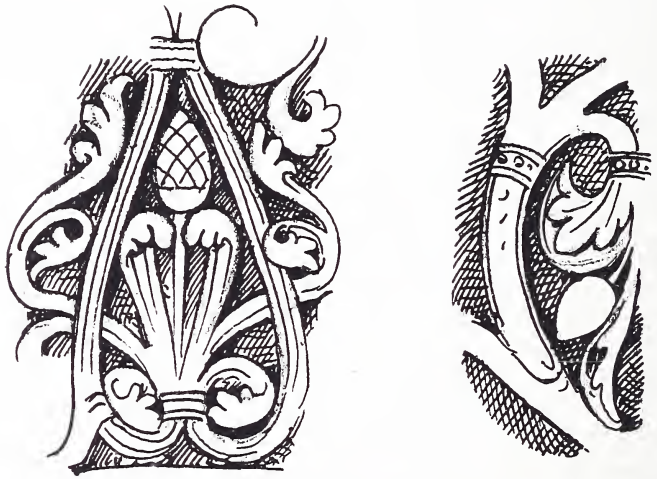
It is therefore not only interesting to trace this connection, but it is valuable, since by comparison distinctive types can be recognized.

LE MANS AND ITS TRADITIONS

The Rhenish Tradition: Professor Baldwin Brown has said that it cannot be doubted that the German monasteries were really the homes of artistic activity in central Europe. There was one general Benedictine style, all over Europe, from 1050 to 1130. There was one language, one faith, one rule of life, the same in all nations, rising above the anarchy and ferocity of the time.

The German Empire was of immense extent, and on the west was bounded by the river Saone. The Royal Domain of France was of but small extent in relation to this, and the Angevin polity but an upstart in regard to its antiquity.

Stained glass is first mentioned in the eleventh century, at Rheims and at Zurich, so it is from the North that this craft would have come first to Le Mans, probably through the Benedictine monasteries, possibly that of Vendome, then so important, and near at hand. This early work has disappeared. When Matilda, Countess of Anjou, came to Le Mans in 1131, she must have been well acquainted with art in Germany, where she had been educated and had lived



From St. Martin des Champs, Paris. About 1135.

as Empress of Henry V. She would have found it natural to encourage it by all the means at her disposal, in her new abode. The Emperor had a staff of artists in his employ who executed works in various centres: e.g. at Zurich.

But no trace can be discovered at Le Mans, as far as I am aware, of distinctly Germanic design, though this is so analagous to what was done there that it would have lent itself to all the circumstances for which art was used.

The church of La Couture at Le Mans is an example of

Lombard art, as modified in the eleventh century by the Normans and others in what is now France.

The presence of glass painting as a craft at Le Mans in the eleventh century, is all that we, in our ignorance of what happened, can attribute to the Rhenish centre. What was being done at Toulouse or in Poitou also may have had an influence which we can trace with difficulty.

The Anglo-Saxon Traditions at Le Mans: Normandy was a great architectural centre for a time with Le Mans as capital, but if the Normans were great builders they were but poor sculptors, even in the eleventh century when they were preëminent in Europe for vitality. In the twelfth century moreover, the whole weight of their influence was centered in England, and it is the Anglo-Norman art, which succeeded the Anglo-Saxon tradition, which therefore became supreme. It seems evident that this Anglo-Norman phase continued to exert an influence after the Anglo-Saxon art, as such, had ceased to do so.

William the Conqueror, on his return from England to Normandy, brought as spoils of war magnificent embroideries and hangings such as astonished his Norman subjects. This proves there was a strong Anglo-Saxon art, and this is in evidence at Le Mans. This art however, has been lost to view to such an extent, that we do not think of it as having had any influence on the art of the continent.

Beautiful manuscripts still exist, which prove to us by direct evidence that the Anglo-Saxon art had been formed by a mingling of Irish, Norse, and English traditions, continuing from the time of Charlemagne, and was a mixture of interlacing ornamental design and animal forms such as the Northern peoples delighted in.

Under the name of "Opus Anglicum" these manuscripts, because of their mastery of technique and richness of imagination, were sought after by the nobles of the continent up to the thirteenth century. The early date of these manuscripts, and their resemblance to stone carving leads to the

idea that they influenced the art of stained glass in the twelfth century.

The principal centre of their production in England was Winchester; the rich borders of the Winchester school can be seen evolving from a simple beginning to the tenth



Anglo-Saxon design of the Winchester School dated 963-964 A. D. (Harley Ms. No. 2904 British Museum, London).

century. Two manuscripts of this school which were brought to Jumieges by Bishop Robert of Canterbury in the eleventh century, are still in the public library at Rouen.

The presence of such works in Le Mans, whither they would certainly have been brought from England by the Countess and others, makes their utilization there for designs for glass and other decoration highly probable.





Sculpture from Malmesbury Abbey, and typical Anglo-Saxon illumination, the probable source of inspiration, according to Professor E. Prior.

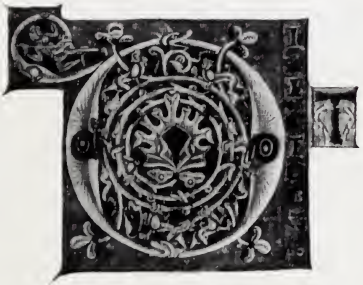
In 1136, the Bishop Guy de Breton bequeathed many manuscripts to the Cathedral. When one has seen a certain number of these Anglo-Saxon manuscript illuminations and has examined the design of the glass at Le Mans, he perceives a similarity of treatment which makes it evident that the designs for the figures in the glass and for some parts of the ornament were based on such drawings. Certain diapers are like those found in the Anglo-Saxon illuminations of the eleventh century, in the Miracles of St. Edmund, and similar works. The drawing of the drapery, of the hands, of the legs and boots, of the trees and accessories, is of the same character in the glass and in the illuminations. The attitudes are the same, also the treatment of the hair.



Columns from St. Denis, of a type of design found in use in Paris about 1135.

Professor E. Prior of Cambridge, England, has shown in the figure here reproduced that the eleventh century illuminations have been copied in the sculpture on the archivolts of the doorway at Malmesbury, so it is not unlikely that the same thing occurred in that part of the continent where they were circulating as in England.

A drawing of Bishop Hugues de Saint Calais of the early twelfth century is preserved in the city of Le Mans, and the treatment of the drapery is like that of the glass in the cathedral; the natural tendency of the pen to produce certain forms seems to explain the forms we see in other crafts.



French design of the Twelfth Century stated to have been inspired by Anglo-Saxon illumination. From St. Germain des Pres, Paris.

A French expert and critic, Mr. A. Haseloff, says of the Anglo-Saxon illuminations, that the national style in England reacted in the twelfth century on the Continent, and that at Paris, a poverty of motifs existed, and resemblance with English work can be seen. "No country or period has seen in the artistic decoration of initials such rich imagination or taste." (Hist. de l'art, André Michel.)



An Anglo-Saxon Illumination from Westminster, the design of which is found in a panel of stained glass in Bourges Cathedral, France.

At Bourges cathedral is a panel in stained glass, of the early twelfth century which is evidently inspired by an Anglo-Saxon illumination of the Annunciation, from Westminster, here given.

RELATIONSHIP WITH THE EAST AT LE MANS

Every one criticizing the twelfth century glass at Chartres, has remarked its Byzantine character. Mr. Henry Adams





ORIENTAL SILKS, "HOLOSERICA"

The Annunciation is from a Sixth Century silk at the Sancta Sanctorum, Rome.

has spoken of it as the "art of the Crusaders." Didron saw in it much that he found in the Byzantine art of Mount Athos in Greece. This oriental character is an admitted fact, but how did it get there? The same character is not found in the work of the eleventh century at Chartres and must have come in later.

We shall show that Chartres and Le Mans are intimately related and form one school; and we see that a direct connection between Le Mans and Jerusalem existed in 1131, for the Count of Anjou was King of that city and there would be constant intercommunication; he would send presents to his son and daughter-in-law. We need not only imagine what went on; we may appeal to fact, for a book in Latin, written by a Frankish scribe under oriental influence, and bound in ivory carvings of typical Byzantine character is preserved in London. It is known as the Psalter of Melisinda, the wife of Fulk of Anjou, King of Jerusalem. Between this work and the windows at Le Mans and Chartres, there is evident analogy. The border and arrangement of subjects in medallions, are of striking similarity.

I would suggest that this oriental influence would have reached Le Mans early, before reaching St. Denis and Chartres, though it would have come there later. In the thirteenth century, tens of thousands of returned Crusaders were in Europe, but by this time the new art of the Ile de France had been formed and was in use, and the oriental type of design was passing away. It was therefore in an earlier period, before 1140, when the twelfth century decoration was in formation, that influence from the East must have been potent, and particularly at Le Mans, at the court of Geoffrey the Handsome, son of the reigning king of Jerusalem.

We can, moreover, trace a special channel by which such oriental traditions not only could have come to the West, but by which they did come: that is the woven silks, many examples of which are preserved.

ORIENTAL SILK A SOURCE OF INSPIRATION FOR GLASS

As early as the eighth century, Persian carpets and silks are mentioned as being a precious decoration. Oriental textiles were hung on the walls of churches, and Bishops and Abbotts encouraged their imitation in the West. (Palermo was a centre of such work for a long time.) They gave lustre to the ceremonies of the church, as we see them painted in Florentine and Venetian pictures, and the bodies



A medallion from a Twelfth Century window in Le Mans Cathedral designed on the basis of the Holosericum.

of distinguished people were buried in them. Thus pieces in actual use in the twelfth and thirteenth centuries have been preserved to this day.* They were imitated in

*Several examples are preserved at Le Mans. One is the shroud of St. Bertrand, a Persian silk of the sixth century. Another is that of St. Julien. It is recorded Guillaume de Passavant bequeathed fine chasubles of silk embroidered with figures of animals, and seven carpets to be placed before the altar. Matilda presented a pallium to the church at the baptism of her son, and later gave two precious silks (dorsalia) and a carpet. These are records of facts as real as the existence of the manuscripts at Rouen.

wall paintings, as proved by remains at Chartres, Clermont, and Auxerre, in the twelfth century.

There was then, reason why the translucent surface of glass should be designed with view to giving the effect of an Oriental silk. Both arts existed for colour and ornamental design, and both were used as architectural decoration.

At Le Mans, in the early twelfth century, first appears the famous "medallion" system of design in glass, i. e., the arrangement of subjects in circular panels. One of the most usual designs of the Byzantine silks was the wheel pattern; such fabrics being called "Holoserica Rotata." It is just this we see copied in wall paintings at Chartres and at Clermont, and the circular medallions in glass are the same idea. These "wheels" in the silks contained animals, single figures or even groups, and the "wheel" itself was richly decorated. In the interspaces were placed other ornaments, giving an even distribution to the whole design.

At Le Mans, Chartres, and elsewhere it is noteworthy that not only are the same circles and subjects found in the stained glass, but they are decorated with ornament and pearl borders, as in the textiles. Such a coincidence in the general arrangement and in the details, is hardly fortuitous, and the more so since very soon, the ornamental border of the circle became merely coloured lines, pearls and ornament dropping out. Details of ornamental diapers in glass are found also, identical with ornaments in the textiles, as at Vendome and Chartres.

But of course a window was not exactly a textile, and the wheels alone were not sufficient. The broad central space was surrounded by a wide border, which enclosed them. These borders are the glory of the twelfth century glass, and were not equalled later.* The border and medallions together form the typical design for early glass.

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*The gradual loss of interest in the borders is one of the reasons why the later glass is inferior to the earlier. One can see these borders in the thirteenth century glass at Chartres and at Canterbury undergoing transformation.

This relation of the glass at Le Mans to the silks, though it has not been noted hitherto, is most natural. Mr. O. M. Dalton in his book "Byzantine Art and Archeology" says that textiles, especially woven silks, exercised an important influence on mosaics, ivories, mural painting, and sculpture, and that Western romanesque ornament can be traced to this source. The use of animals in medallions is of Persian origin.



Borders of medallions and an interspace ornament. Twelfth Century glass at Le Mans.

There is then reason why glass should have been thus inspired. At Lincoln in England, we see a column in stone treated with the familiar circles of the silk designs with their contents, and adjoining is another of the type of those of the Chartres portal, which may have been designed from an illumination or carving.



(a)



(b)

Sketches of a design from the glass of the Twelfth Century in Chartres Cathedral, (a); and of another from oriental silk in the Musee Royal des Arts décoratifs, Brussels, (b).

CRAFTSMANSHIP AT LE MANS

We must not suppose that before 1130 nothing was done at Le Mans. The eleventh century church there, La Couture, must have been glazed. There was a tradition of working craftsmanship in glass at least from 1083, for it is recorded in the acts of the Bishops of Le Mans that Bishop Hoel "decorated entirely the apse and the transept of the cathedral with windows, in all the admirable and sumptuous variety of the art," (meaning richness of aspect).

It is known also from documentary evidence, that in 1096, a glass painter named Guillaume, called "Vitrarius," a title added to his name and retained as late as the eighteenth century, was at work there. The fact that he was working at Le Mans at the end of the eleventh century proves the antiquity of the school in which various traditions were united into one art in succeeding years. Glass is mentioned again in 1110, and again after 1150, so that there was persistent production at Le Mans.

There is still a street in this city called "Rue de la Verrerie," and it was there no doubt, that glass and windows for the cathedral were made for a long time. Glass making was at that time a noble art, so much so as to confer nobility on those engaged in it, if they were not already noble.

As no such facts as these are recorded of Chartres or St. Denis, they create the presumption that Le Mans was the centre whence the tradition of this glass extended.

This is dependent on the fact that the glass at Le Mans, Chartres, and St. Denis is of one school, so that the three centres are linked together, whereas the glass at Rheims is of another school. The similarity of the portals in the three places confirms this idea of relationship.

THE GLASS OF THE TWELFTH CENTURY AT THE CATHEDRAL OF LE MANS

There is a great deal of fine thirteenth century glass in this cathedral, and at first sight that of the twelfth century seems of but small account in comparison. But on closer

inspection, the latter is found to be of great beauty and fine quality from the esthetic point of view, and of unusual interest from the point of view of design, and when one has come to see the relationship of these scanty remains to later work, they become singularly important. The effect in reproduction is repellent, but in the glass itself, this is by no means the same, for they give a quiet refined effect similar to the Eastern silks of which mention has been made.

There are three windows of the same date: the Ascension, the window of St. Gervasius and St. Protasius, and a panel of Angels holding a cross. A life of St. Julien is also traced.

The features of these windows are alike in the three cases, and the figures have an unquestionable relationship to the Anglo-Saxon illuminations in design. The same is true of the borders, trees, and foliage, and of architecture and small diapers and lettering. There is proof of similarity of origin with the panel at Vendome, "La Vierge Byzantine," in which also there is a likeness to the "Opus Anglicum" some of which must have been in the possession of the Abbey Library there.

The medallion windows at Le Mans are such as might have been designed on the lines of the Holoserica, along with English foliage details. The subjects are freely treated, and energetically designed, feet and hands being pushed out beyond the ornament in a way no oriental designer would have ventured upon.

These medallions are, as far as can be judged, of the same origin as the South window of the West-end series at Chartres: the ornament, and the figure designing is the same. The circular borders are of the same character, and fix the date. A similar medallion is found at St. Pierre de Chartres, a last remnant of the glass executed for the Abbey of St. Pierre, after the fire at Chartres in 1134; there is nothing to distinguish this from the work at Le Mans. The fire at Chartres occurred within two years of that at Le Mans.

The glass at Poitiers and Angers proceeds from that at Le Mans, and is later by about twenty or thirty years than

the earliest windows we see at Le Mans, which, we take it, are of about 1140.

No trace remains of the early twelfth century glass recorded to have been executed at Le Mans in the choir and transept, and its absence is eloquent proof of the many links now lacking in our researches. Hence we are obliged to build up hypotheses on slight grounds; but in the end, by an accumulation of such hypotheses we can hope to attain truth similar to that which is found in the reconstitution of extinct species of fauna from the few bones, which are all that remains of these early creatures.

THE INFLUENCE OF WOMEN ON THE ARTS OF THEIR TIME

Whatever influences were at work on design we may be certain that no work was done in Le Mans, apart from intelligent and sympathetic patronage. It is a remarkable fact that in every case where ancient glass is found, there has been some person of learning and taste, a centre of culture, and power to spend money.

The artist alone can do nothing, for his ideas can be realized and become vehicles of expression only where he is provided with financial means, whereby he may secure materials and devote himself to his work. The world owes a debt to patrons as well as to artists for every work of beauty found in the middle ages. The glass at Le Mans implies such patronage as surely as petrified remains in museums indicate once living animals, and there is no doubt that the Bishops in that city were much interested in the advancement of art.

But Saxons and Normans paid great deference to the intuitive opinions of women. They were the partners of their husbands, and de Chaillu records in his book "The Viking Age," that they habitually cared for the homestead while the husband was away. This general custom was acted upon, for instance, when William of Normandy left



SCULPTURES OF THE PORTAL OF LE MANS

The figures are placed on columns ornamented in a way commonly found in England in the Twelfth Century

his wife Matilda in charge of his continental domain, for six months, while he conquered England.

The twelfth century was a time of emancipation. Robert d'Arbrissel carried out his mission of grace in their behalf, and piety ripened into chivalrous enthusiasm. An ideal of maternal purity was established by 1154; woman reigned, shared legal rights of judgment with her husband, and succeeded to titles.

The kingdom of France alone had other customs, which seem to have been derived from the Salic law of the Franks, while the Vikings had the same law as the Burgundians, who also allowed titles to descend to women.

These particulars will give an idea of the importance of a later Matilda, daughter of Henry I of England, of whom mention already has been made, and who was worthy of her ancestor, the wife of William of Normandy. Leaving England as a young princess, betrothed to Henry V, she went to Germany and was entirely educated there. She was there married, and Henry died eleven years later, after which Matilda was brought back to England by her father Henry I, who required his subjects to recognize her as his successor to the throne, her brothers having died. Four years later, she married Geoffrey Plantagenet, Count of Anjou, and again left her native land for the continent. She was at this time twenty-seven years of age, and had added to her knowledge of German art, acquaintance with that of Anglo-Saxon origin. She found herself at the head of the court at Le Mans at a time when life was at its best, and being of an imperious nature and considerably the senior of the count, on account of the latter's pressing political obligations she probably entered actively into the work going on at the cathedral. She remained at Le Mans four years, after which she returned to England where she died in 1164.

No circumstances more likely to bring to the powerful court in the West an Anglo-Saxon tradition could be imagined. The illuminated manuscripts were so costly

as to be within the means only of communities, or of such persons as the countess Matilda, who no doubt possessed many such works of art.

We can imagine this lady as she went out with a gaily clothed throng hunting in the forest, or as she presided at assemblies at night in the banqueting hall, ablaze with torches and enlivened with music and songs of troubadours.



An Ivory carving on the Melisinda Psalter (Edgerton Ms. No. 1139, British Museum, London). It contains elements from the antique and from oriental and occidental sources. Crusaders are analogous to the west windows of Chartres Cathedral. From a sketch by the author.

Such things, absent from our life, were then every day facts. The sombre masonry of the church near the castle, hung with oriental silks, and decorated with rich, bright windows, was the setting also for the ceremonies in which enamel reliquaries and ornamented vestments seen by candle light were accompanied by the music of Gregorian chants—for music also, was an art cultivated at Le Mans.

It is in such a setting we must imagine the windows, the scanty remnants of which are extant and available for study. Then only shall we have even a partially adequate idea of the gorgeous colour of the entire effect composed of these brilliant parts. The whole was intended to rival the wonderful Orient, descriptions of which, made by returning Crusaders, haunted the minds of people as a vision of fairy land.

Matilda was the mother of Henry II of England, and her daughter-in-law, Eleanor of Aquitaine, succeeded her as Countess of Anjou.

Married in 1137 to Louis VII of France, she was present, as queen at the consecration of St. Denis in 1144. She was at Antioch in 1147. When separated from her husband, she married Henry, Count of Anjou, then King of England, and so came to Le Mans and Poitiers, which was her own possession. She is known to have been a munificent patron of art and the cathedrals of Poitiers and Angers were built under her influence in a peculiar style known as the "Plantagenet" architecture. If she were at Le Mans in 1152, she was there when the west portal of Chartres was being built, and it is possible indeed that she may have been directly interested in it. At her death in 1204, the independence of Anjou ceased, and with it, its local art.

The lives of Eleanor and of Matilda illustrate how patronage enabled local styles to exist before the style of the Ile de France was adopted officially.

THE RELATIONSHIP OF POETRY AND ART

Short reflection will suffice to show that there must be close connection between the thought of an epoch and its art, but however true this may be, it is but recently that these have been corelated.

If the arts "blossomed as in spring" in the twelfth century, it was because a new spirit was in the air. Chivalry in action, romance in literature, enthusiasm in religion, the establishment of universities for learning: all these were signs that a new culture was growing up, and all were

related. A spirit of coöperation led to city communal life, and craftsmanship in the cities created an art of romance, "the literature of the hands." We see the spirit of romance in the names of the castles: Blanchegarde, Nigraguarda, Beauvoir, the "Chateau Gaillard" of Richard, and the "Mirabel" of Henry II. We see the same spirit in the high vaulting, the flashing windows, and the sculptured stone.

It was in such an atmosphere that the "Opus Anglicum" and the silks of Byzantium fell as seed, and through this inspiration grew to maturity the most remarkable art of the middle ages, "the window of dyed glass, the most perfect art-form ever known," as Prof. Lethaby describes it.

Turmoil, violence, and war had been ripe in Europe from the sixth to the eleventh centuries, and the twelfth still retained much of this spirit. The "Chansons de Geste," stories of deeds, breathing an atmosphere of battle, circulated in the opening years of the century, and art, in such stories as the "Chanson de Rolland," was particularly located in arms and armour.

But another character appeared shortly, especially among the Normans, who were intellectually clever and gifted with sentiment. This was the spirit of Romance, appearing first in the Breton "lais" of King Arthur and Iseult, which were taken up and sung in the Norman provinces. The fabuluous History of Geoffrey of Monmouth also became famous, and was read eagerly about 1139. This was the source of inspiration for many stories in the fuller literature of the mid century, in the time of Eleanor.

Geoffrey of Monmouth was about the same age as the countess Matilda, hence his "History of Britain" indicates the thought of her time. It is a series of fabulous and fantastic stories, the adventures of Brutus, of Corineus, and the Cornish Giant, Goemagol. The later writers, gathering ideas from this source, composed the Arthurian legends, such as the "Roman de St. Graal" and the "Roman de Merlin."

It is not possible here to go into details, and it suffices to establish what was going on. In the first half of the century, the increasing gentleness of life was evidenced also by a number of lyrical songs, such as the "Chansons à filer" or the songs of the wool spinners, and songs for dancers and for Crusaders.

This literature reflects the energetic character of the time as well as rising intellectual power. The people who sang these songs, assembled in the Cathedral in the early morning, where the windows glistened in the light like rich textiles, and here they enjoyed the representation of the histories which they knew. Every one took it as a matter of course that art should be "sumptuous in its variety" and precious like the Eastern silks, but into this framework, artists now placed a naturalism of western origin, which reflected the life and movement of their songs.

It is this introduction of a personal note and active movement in a decorative scheme, which is most characteristic of the art of the time. The design of the medallion pictures becomes different from that of the silks, as they were worked out from suggestions in the Anglo-Saxon illuminations. The scenes found at Le Mans are full of life and movement: men are digging, flogging, or stoning, others are asleep and dreaming. We do not see there statuesque figures like stone effigies, so general in later glass. All this activity however, is only suggested, within the limits of oriental art and is never imitative in the modern sense.

A record of the time, preserved at Le Mans, gives us an exact account of the feelings of those who saw mid twelfth century glass, put up by Bishop Guillaume de Passavant, between 1142 and 1186: There were two ranges of openings with coloured windows in a vaulted chamber for the Bishop's use; this led to a chapel decorated with windows, of which it is said there were "figures painted with admirable talent, *true representations of living persons* which not only attracted the eyes, but which captivated the faculties, so that they who saw them forgot their business

and were plunged in delicious admiration, and those who were called remained inactive, astonished, as if fascinated by the pictures." The force of this passage is felt by a comparison of what is said of Bishop Hoel's glass in 1093: "windows with all the sumptuous variety of the art," or later, of Bishop Hildebert's glass in 1115: "he enriched the chapter house with magnificent windows."

Naturalism has been considered an "advance"; it gave rise to western forms of art, but it was the thin end of the wedge which resulted finally in the loss of the decorative beauty brought from the East, that beauty which makes things optically precious, apart from ideas which they suggest. But as in the quatrocento at Florence, so in the twelfth century in France, there was a moment, when Western naturalism went hand in hand with Oriental decorative beauty, and it is at that fine moment that the Portal of Chartres and its windows were executed. We see in them Byzantine magnificence of colour, with character due to interest in human action. This is explained, by the poetry of the time as well as by its history.

THE ABBEY OF SAINT DENIS AND CHARTRES CATHEDRAL

Reference has been made to the fact that twelfth century work similar to that at Chartres was found at Le Mans and at St. Denis. The question as to which of the three localities is the original source is under discussion.

Saint Denis: The Abbey Church of St. Denis near Paris, the place of sepulture of the French kings for centuries, was rebuilt by the Abbé Suger, in 1144, and up to that time the church of Charlemagne was used. He began building at the West end, and the Portal therefore is dated from 1140. The choir was consecrated four years later.

In the structure of the church, the Abbot had at his command the master masons working in his district. In this building the new style of the Ile de France was first employed

on a large scale, a fact for which the Abbey is justly famous. This style had been developed during the preceding thirty years, and was ready at hand for his use. But for the decoration it was different.

The Abbot says, he invited "strangers" to work at the divers arts of decoration for the church; it is clear then, he had not at hand what he required. So it is difficult to see on what ground it can be assumed that the Chartres school of glass painting was started at St. Denis. The sculpture of the Portal also was not part of the structure, and as it was probably or even certainly coloured, it counted as decoration.

There is so much analogy between the glass at St. Denis and that of Chartres, it is taken to be by the same hand, and some of the glass at Chartres is the same as the glass at Le Mans. Knowing the history of glass in that city, from the early twelfth century, and knowing the importance of Le Mans as a centre, it would seem natural that the Abbé Suger should have drawn thence some of the strangers to whom he refers. It is difficult to accept the opinion emitted in Paris, to the effect that a new style came about at St. Denis from a fortuitous mingling of craftsmen from various centres.

The Portals of St. Denis have been so broken and restored that they do not offer full material for examination, but some of the ancient parts have the peculiar ornament found at St. Martin des Champs of Paris, and again at Le Mans and at Chartres. The figures still remaining are of different technique to those at Chartres, and other elements found there and at Le Mans are lacking.

CHARTRES

Chartres was a centre of pilgrimage from Gallo-Roman times, and for two centuries, till 1190, it was also a school of humanistic culture. None of the sculpture executed there previous to the Portal of the Cathedral was in the same style; there is no gradual evolution leading up to this work. The sculpture in the towers executed between 1137 and 1160



reproduction in the Trocadero at Paris, of columns and figures from the West Portal at Chartres, showing the large columns with a Norman diaper, and the small columns like those at Lincoln.

is of a different type than that of the portals. The conclusion therefore seems to be, that the sculpture of the Portal is due to workers coming from other localities.



From a drawing of Viollet-le-duc of a column in the West Portal of Chartres Cathedral, about 1150.

Chartres was an independent centre about half way between St. Denis in the north and Le Mans in the south; it was in the Angevin architectural province. The prototype of the "Clocher Vieux" of Chartres is the tower of the Trinity, at Vendome, a fact which suggests more may have come from the South.

In 1134, a fire which led to the destruction of the present towers destroyed much of the town. The Abbey of St. Pierre was then burnt, and afterwards rebuilt. A panel of the glass of this epoch which is still in the Abbey, is like that of the cathedral West windows, and similar to that at Le Mans as stated, while many points of the West windows are similar to the glass at Le Mans.

In 1194, another fire occurred which led to the rebuilding of the nave of the cathedral, the transept, and the choir. Chartres by this time, had become part of the dominion of Philippe Auguste, and the new part was built in the style of the Ile de France. The stained glass in that part of the building is of the thirteenth century, distinct from that of the West windows, except the central panel of "La Belle Verriere," which is of the twelfth century, and which has been removed apparently from the early apse, rebuilt later on. This later glass has no likeness to that of Le Mans.

The sculptures of the figures on the columns of the Portal are of great beauty, but they are different, as said above,

from those at St. Denis. The capitals are not like those found either at St. Denis or Le Mans. The diapered columns however are similar to those at Le Mans. The bases are similar to others in the West front of Rouen cathedral.

Mr. de Lasteyrie affirms that the sculptures of the Portal



Early Twelfth Century Anglo-Norman carving from the West Portal of Lincoln Cathedral, England, to be compared with a similar column at Chartres, shown on opposite page.

at Chartres "differ in the most complete manner from the style of the Ile de France."

If on leaving Chartres one examines the Portal at Le Mans, it is seen that the tympanum of the central bay at Chartres is practically the same as that at Le Mans, and probably by the same hand. This Portal has been placed



PANELS OF TWELFTH CE
Showing a change in design due to the needs of the m



LE MANS CATHEDRAL
d on the conception of the oriental silks.

as late as 1169 by Mr. Louis Gonse, who derives it from St. Denis; Mr. Vöge derives it from Chartres; Mr. de Lasteyrie makes it contemporaneous with the portal at St. Denis, about 1140, and this also is the opinion of Mr. G. Fleury.

These conflicting judgments show that here, in the greatest monumental sculpture of France, is a question still unsolved. The figures in the voussoirs of the Portal at Le Mans are drawn in such a way that they seem of a family with the figures in the glass; and as these evidently are inspired by Anglo-Saxon illuminations, those in the stone may be also. The peculiar linear treatment of the drapery may be due to that origin. In that case, part of the work at Le Mans at least, is due to a local craftsman; the capitals above the large figures are of the Angevin type, and the columns below are diapered like examples seen at Lincoln, of the early twelfth century, at Canterbury and elsewhere in England.

The peculiar early twelfth century ornament found at St. Denis, Chartres, and Le Mans is very rare, and does not appear to be general in the Ile de France. It is found in illuminations of the twelfth century, and a number of similar designs are found in wood carving in Scandinavia. The French archeologists admit they do not know the source of this ornament; it appears to be due to a northern source. It is found in about forty places in England, and this distribution precludes the idea that it can be a mere copy of work done in St. Denis, in a district where a style with a tendency in another direction was being started.

It will be seen from all this that the question is still very obscure, but in any case the assumption that both Chartres and Le Mans drew all their inspiration from St. Denis, as has been suggested, cannot be correct. This simple origin does not fit the complexity of the facts, and while further inquiry is called for, it is evident that too little account has been made of the Angevin school and its relationships with Northern sources of inspiration.

CONCLUDING REMARKS

The preceding examination may suggest many reflections, but the principal result is this: French architecture of the thirteenth century is so vast, so magnificent and refined, it has with reason drawn almost exclusive attention to itself, and this has thrown a shadow on twelfth century art, which really is greater for its mastery of decoration as well as for ornamental design in colour.

From a simple beginning, after centuries of anarchy, the arts reached a point of noble development, along right lines. A fund of tradition, born of wide experience, came from the East and the West, and led the crafts to "blossom as in spring." This was helped by the spirit of Romance then prevailing. Both this spirit and this tradition slowly disappeared.

An increasing taste for naturalism and absorption in construction, led away from the art of the twelfth century. Sculpture in the end lost its decorative flatness, its ornamental character, and became realistic. Glass slowly ceased to be valued for colour, texture, and beautiful design, and drew its inspiration from the sculpture, the effigy, and the stone tabernacle. In later times, as in our days, it became pictorial. Where ornament is used it has been supposed to be easy to produce, and is looked upon as a lower art, instead of being what it really is, the opportunity for the highest artistic skill, when rightly used.

We could do all that has been done; we could make windows precious works of art. But it is only by obedient attention to right principles, by assuring a right technique, by working on right lines as both artists and craftsmen, and yet as free men,—only by this means can we succeed. To do this requires understanding on the part of the public as well as of the artists, and a patronage as of old, which a fuller education will render possible.

C. H.



FISH

CHASE ON "STILL LIFE"

IN 1912 I met William M. Chase in Europe and under the spell of his praise of Bruges, the old Flemish city of the chimes and canals and "the picturesque bits at every turn," I made plans to stop there later in the summer. The day after my arrival I went with him to his studio, saw his latest work and had also the rare privilege of witnessing the artist paint one of his most important still life pictures from beginning to end.

As every one knows, Chase is a prolific painter, and the uniform merit of his work is one of his most pronounced characteristics. His more pretentious pictures reflect the highest credit on the art of our country, and no one can say of his minor performances that they are weak. He is represented in almost all American museums of high rank and he is esteemed in foreign countries as one of the leaders in contemporary art. He is a Knight of the Order of St. Michael of Bavaria. The permanent collection in the Neue Pinakotek in Munich includes one of his works; another is in the National Museum at Buenos Aires. Together with John S. Sargent and the late G. P. A. Healy he was invited to contribute his self-painted portrait to the National Portrait Gallery of Artists in the Uffizi Gallery at Florence, a very rare distinction. Many other honors have come to Mr. Chase during his long career in the service of art, but of all the honest gratification which he has had occasion to feel through the recognition of an appreciative public, Mr. Chase has valued nothing more than the admiration evoked from his own pupils. On this subject he speaks frankly and it seems to me what he has to say is based on sound common

sense: "I think I may call myself a busy man; I paint as hard as I can; never a day goes by but I paint and work at the top of my powers. I have been criticized for having devoted much of my time to teaching, and some of my professional brethren have asked how I can stand the nervous wear and tear of leading the novice slowly and painfully to the light. Far from regarding this work as a waste of energy, I consider the office of the teacher to be one of the highest honor and I am doing what I can to help those who come after me to tread the path which I have pursued for many years. Besides, teaching is a good thing for the artist. The association with my pupils, most of them young people, has, I may say, kept me always young in my work, and my interest in my own painting fresh and ever renewed. The analysis of my pupil's work and the incidental formulating of correct principles, keep me, artistically speaking, healthy and my point of view clear. It is good for the teacher and good for the pupil to repeat the creed. For instance, do not seek for the distinguished theme, the grandiose, and then try to paint up to it; but paint the commonplace in such a way as to make it distinguished. When you discover with your finder a composition which you consider very well balanced and very picturesque, move the finder along and take a corner of it. These and similar aphorisms express what I mean.

"It may be that I will be remembered as a painter of fish; I find still life a thoroughly sympathetic kind of painting and I enjoin my pupils to paint still life as one of the best exercises in form and color. I am not of that school of instructors who would banish the onion from the classroom as unworthy of study."

With this, Mr. Chase pointed by way of illustration to a canvas showing a group of copper cooking vessels and vegetables, including onions. The onions exhibited such truly beautiful color and such admirable texture that one could almost peel off their satiny skins.

"I enjoy painting fishes: in the infinite variety of these creatures, the subtle and exquisitely colored tones of the flesh fresh from the water, the way their surfaces reflect the light, I take the greatest pleasure. In painting a good composition of fish I am painting for myself. I can understand Sargent's disinclination to paint any more portraits for money; he has doubtless felt the annoyances to which the portrait painter is constantly subjected—the habitual frequent interruptions, the client's restlessness, the uninformed criticism which falls on the painter's ear—such typical experiences, happily not always the lot of the portrait painter, make this branch of art, to me, sometimes a punishment rather than an inspiration and a delight. I am glad to say my own taste for fish pictures is shared by a sympathethic public: nine museums have examples of my work of this class."

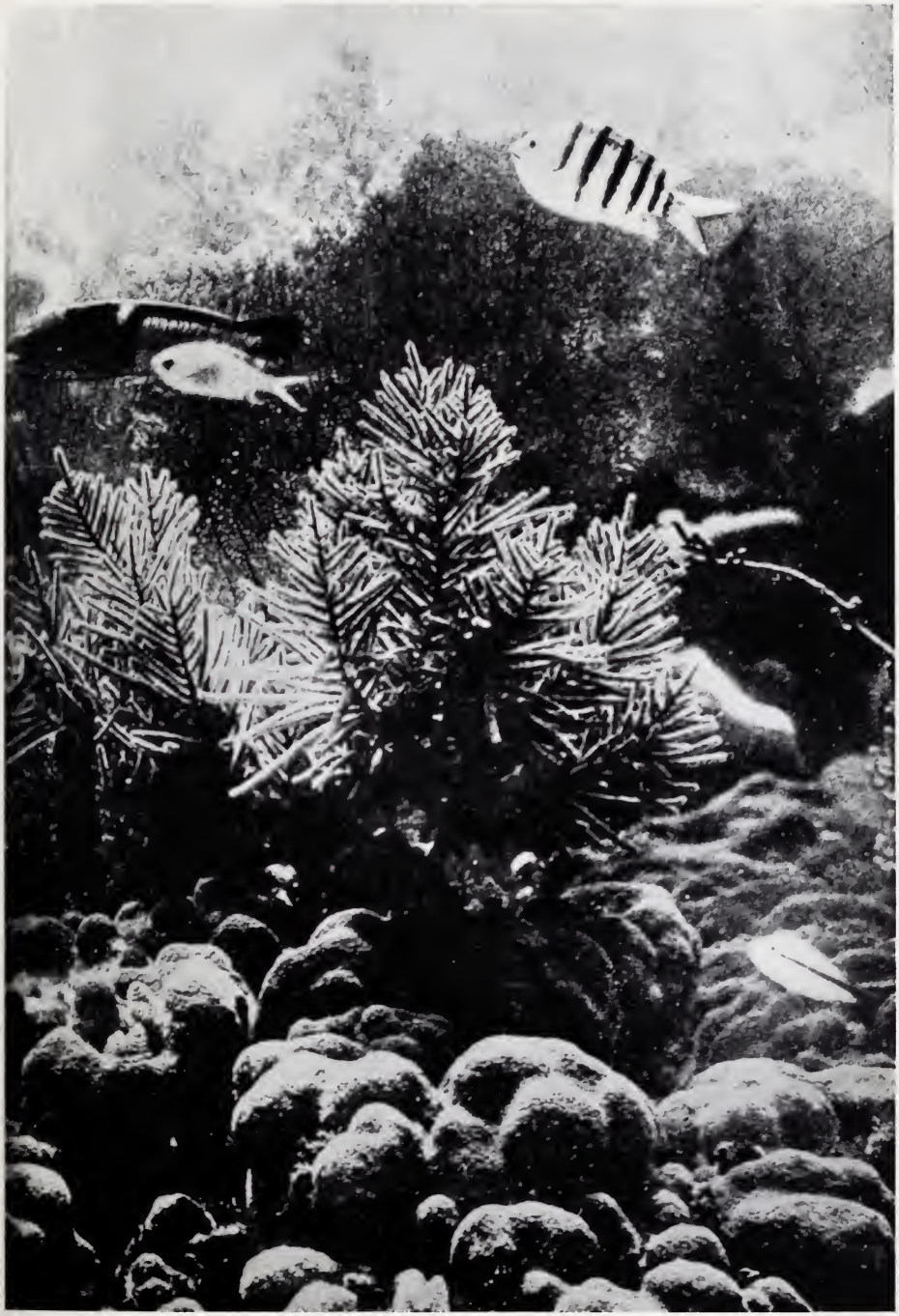
On a table in a corner of the studio lay a group of fish, fresh that morning from the Bruges market, wet and glistening. A monster of the skate kind, a large cod, and some North Sea herring lay together in artistic juxtaposition, and formed a composition which Mr. Chase intended to paint. The canvas had been prepared with a surface of silvery white and blue tones somewhat resembling the prevailing color of the fish. Over this the painter put in a background of a reddish-green tone. A small spot of brilliant white shone on one of the fish. Mr. Chase had put on the canvas the highest light and then rubbed the darkest tone into the picture. "Between these two tones," said he "is my gamut. I must not allow any of the intermediate tones in the picture to reach either of these extremes no matter what the light or shadow on it may be." As the painter proceeded, intelligible form began to arrange itself from space, the swirls and strokes of the brush drawing in with the pigment the masses and the details of the work with a certitude and firmness of touch only possible in a master. Once in a while the fish were freshened up with douches of ice water, which the

painter gathered up with a dipper from a tin pail with his right hand while holding his palate and brushes in his left. For four hours a group of spectators, most of them Mr. Chase's pupils, watched him working at the subject with concentration of mind and feverish energy. There was little conversation during that period. Once in a while an ejaculation of praise came from one or another of the spectators as a felicitous touch of color or light went into the striking composition emerging from the canvas. Every quarter of an hour a shower of silvery notes floated down from a neighboring belfry and the echo of fainter, far-off chimes broke the silence. The atmosphere of the studio was fraught with nervous interest and enthusiasm.

Two Belgian painters had come into the room while the picture was being painted, and they, like the others, shared in the excitement of the occasion. It was plain that Mr. Chase heartily enjoyed the work and was inspired by the spectators' interest. His facility in painting this work was astonishing. When he threw down his brushes at noon, the picture was so far advanced that it might very properly have then been exhibited.

This painting, shown for the first time during the following winter at the Pennsylvania Academy of the Fine Arts is now in the permanent collection of the Brooklyn Museum.

W. H. F.



Copyright 1914, Williamson Submarine Expedition.

"SEAGARDENS," NASSAU, BAHAMAS.

THE BAHAMAS

CORAL REEFS AND CORAL ISLANDS

PRE-EMINENT in the Brooklyn Museum's Hall of Invertebrates stand the exhibits of Corals and Sponges. These collections, the largest and finest in the United States, were brought together, in part by Dr. A. G. Mayer, former Curator-in-Chief of the Museum, on expeditions to the Dry Tortugas, Florida and to the Bahamas. The greater part, however, the Ward Collection of Corals and Sponges, gathered from all parts of the world, was purchased during the administration of Dr. Frederic A. Lucas through the Museum Collection Fund of 1906.

Visitors cannot fail to be impressed with the beauty and variety of form, and with the great size of some of the specimens in these collections. And yet the specimens as they appear in the Museum are only dried or bleached skeletons with no indication of the myriads of small, delicate creatures by which they were produced. In order really to appreciate the beauty, the grace and the vivid colors of corals and sponges they must be seen living in their natural, aquatic environment. Some species, it is true, occur in our temperate zone, but their highest development is reached only in the clear waters of tropical seas.

There is now in course of construction in the Brooklyn Museum, a submarine group representing a coral reef, studies and collections for which were made on the Museum expedition to the Bahamas during May and June, 1914. Included in this group will be not only corals and sponges but sea urchins, starfish, mollusks, worms, crustaceans and coral fishes as well, all of which form an association of animal life characteristic of a coral reef. To insure

accuracy in reproduction, color sketches of all the specimens to be used in the Museum group and wax models of many were made in the field. It is expected that the group will be placed on exhibition in the spring.

S. C. Wheat, Conchologist, and Antonio Miranda, Modeler and Artist, accompanied the writer on this expedition.



Sandy Cay, with an area not exceeding two acres, stands a sentinel among a number of other larger cays from which it differs by having a dense grove of cocoanut palms instead of the usual low, shrubby vegetation. In the clear waters of the bay facing Sandy Cay studies and collections for the Museum Coral Reef Group were made.

The Bahamas form the northeastern margin of the West Indies. Of the 3,000 or more islands only about thirty or forty really deserve to be called "islands" for the rest are made up of small cays, reefs, and bare rocks, and are not inhabited. In contrast with the other groups of the West Indies, which are mountainous, the Bahamas are low and flat and composed almost entirely of debris derived from corals and other calcareous organisms. These

deposits rest on shallow, submerged banks which are divided from the North American Continent and from the rest of the West Indies by deep ocean channels. Geologists claim that the islands have undergone a former elevation of at least three hundred feet. This has been followed by a more recent depression, which in turn has given place to a still more recent elevation. At the present time the islands are only a few feet above sea level, with the exception of some low hills and cliffs, which rarely exceed one hundred feet in height.

The Tropic of Cancer crossing the Bahamas almost exactly in the middle, the climate is practically tropical throughout. Rain, though rarely long in duration, occurs most frequently during the months of summer and fall. During the latter season hurricanes also are apt to sweep over the islands, leaving great destruction and sometimes death in their path. January and February are the driest months. In May and June of 1914 the hottest part of the day was experienced usually between ten and eleven in the morning. With the intense rays of the sun radiating from the white streets and roads, the heat became oppressive, yet a few minutes' rest in the shade sufficed to restore a feeling of comfort. Sun stroke is almost unknown. The eastern trade wind, beginning early in the afternoon usually blows with some force towards evening and renders the night cool and delightful.

From an historical point of view the Bahamas are of especial interest since it was here that Columbus on his voyage of discovery in 1492 first sighted land and set foot in the New World. This event has been commemorated by a monument erected on San Salvador or Watlings Island, although the exact place where Columbus landed is still in dispute.

At the time of discovery the islands were inhabited by Indians who received the name of "Lucayans." These, Columbus reported, were physically well proportioned and peaceful in disposition. Not finding the gold and riches



Clinging to the rocks were many species of gasteropods, among them large chitons or coat-of-mail shells, which it was no easy matter to detach.

which they sought, the Spaniards did not remain long in the Bahamas, but subsequently, they returned and either enticed or forcibly carried the Indians away to end their lives miserably in mines in Cuba and Santo Domingo. These raids, repeated again and again, completely depopulated the islands of their native inhabitants. A few skulls and bones found in lonely caverns are all that remain of the Lucayans to-day.

As early as 1629 the English attempted to establish settlements, but their right was disputed by the Spaniards and possession changed alternately between the Spanish and the English. During this time also the islands became notorious as the rendezvous of pirates. In 1783 the English gained permanent control. By liberal grants of land American Tories were induced to immigrate in large numbers bringing their slave-labor with them, and this helped materially in the development of the islands. The most prosperous period came during the American Civil War, when the Bahamas were made headquarters

for blockade runners and commerce assumed extraordinary proportions. This sudden wave of prosperity subsided quickly, however, after conclusion of hostilities and its effects have disappeared entirely, except in the memory of the inhabitants who still love to talk of the "good old times" during the war.

At present the population exceeds 50,000, about two-thirds of which is colored. The principal industries are sponge fishing, sisal-hemp growing and lumbering, the latter a recent development on some of the larger islands which are covered with extensive pine forests. Vegetables and tropical fruit in great variety can be grown. Lack of shipping facilities, however, greatly hampers the export of these products, for all the islands of the Bahamas group, with the exception of New Providence, lie outside the usual routes of ocean travel, and access to them can be had ordinarily only through the use of small schooners.

There are very few people of great wealth in the Bahamas, but on the other hand few are very poor. None need go hungry, for enough to sustain life may be obtained by small effort in the sea or on land. The social life circles chiefly round the British Governor and his retinue of officials and reaches its height during the winter when tourists arrive to escape the rigors of a northern climate.

Any strategic value which the Bahamas had in former years amounts to little at present, for the ships of heavy draught of to-day cannot enter the shallow harbors. In consequence the former garrison has been withdrawn and fortifications have been dismantled. Law and order are upheld in a very efficient manner, by a small force of colored policemen. Since the war of the revolution and the civil war very little immigration of white people has taken place. This has brought about a curious relation and interrelation among families especially in the outer islands where everyone is related to everyone else. Students of heredity and eugenics have found in the Bahamas a rich field for study and tabulation.

Daybreak, May 19, 1914, found our party assembled on deck of the New York and Cuba Mail S. S. Saratoga, at anchor outside the harbor of Nassau. Presently a small lighter rounded the narrow ledge on which stands the lighthouse and came alongside for a hurried exchange of mail and freight and the transfer of passengers. Soon we were approaching the palm fringed shore, dimly discernible in the morning mist.

Our entrance into the harbor was different from that described in the steamship folders, for instead of cloudless sky and brilliant display of colors upon the water we encountered a sudden squall accompanied by a turbulent sea, and found awaiting us on the wharf not crowds of colored people, gaily attired, but a few hucksters, drenched to the skin. The customs inspection proving a mere formality with the only leading question "Do you carry revolvers?" satisfactorily—that is negatively—answered, a diminutive carriage drawn by a diminutive horse brought us to the Palm Villa, where accommodations had been engaged. It would have been difficult to find a location better suited for the purposes of the expedition. Grounds extending to the harbor front and provided with a boat landing, greatly facilitated the marine work, as collections when brought in immediately became available for study, modeling, or preservation in a laboratory and workshop, established in a building close to the water. Furthermore, by careful removal from their usual abiding places on reefs or rock shelters it was found practicable to transplant such sedentary but highly sensitive creatures as sea-anemones, tube worms, file shells and the like to the water at the laboratory landing, for extended study under most favorable conditions. Another highly efficient method of securing desirable specimens for study close at hand was that of baiting. Dead animals, such as crabs and conchs, could be used as attractions and the sea wall at Palm Villa would then become the rendezvous of a motley congregation. Sea urchins, starfish, mollusks

and crustaceans, in great variety and numbers, might always be relied upon to be there, and even octopi found hiding places in the crevices of the wall.

Strong winds and rough seas, continued for some time after our arrival and prevented visits to the reefs and coral beds of which there are a number, in the waters surrounding



AFTER GREEN COCOANUTS ON SANDY CAY.

In the absence of fresh water the water of green cocoanuts proved an agreeable substitute.

Native boys excel in swimming, diving and climbing.

New Providence Island. The larger beds, however, lie outside of Nassau Harbor. Our disappointment at having to postpone the most important work was lessened when we found that much interesting material could be obtained along the shore, in mangrove swamps, and in sheltered coves within the harbor. On the beaches, dazzling white or tinged with pink, collecting proved poor, but

the grey, rocky ledges, the principal shore formation, teemed with life. These ledges, undermined by the waves, honeycombed by worms and boring shells, and worn into fantastic and sharp ridges, contained numerous tide pools alive with brittle stars and short spined sea urchins. Clinging to the rocks in particular abundance were many species of gasteropods, among them large chitons or coat-of-mail shells, which it was no easy matter to detach. These mollusks, especially one kind with orange colored flesh, are much sought after by the natives, and are eaten either raw or cooked. Rocks overhanging the water fairly swarmed with peculiarly hideous crabs (*Grapsus maculatus*), with conspicuous stripes in regular patterns on their flattened bodies and legs. Their agility in running along the under surface of the rock was amazing.

Stony corals within the harbor are scattered and usually are of small size; horny corals, otherwise known as gorgonians and sea fans, are well represented and luxuriant in growth. Splendid examples can be seen in the "Narrows" at the eastern end of the harbor in the so-called "Sea Gardens" which are one of the principal sights at Nassau and are shown through glass-bottom boats to tourists during the winter season. A few years ago, and none too soon, the "Sea Gardens" were made a marine reservation under Government protection. However, outside this restricted area, indeed throughout the harbor wherever strong currents prevail, gorgonians, sea fans, and sponges in great variety, though of no commerical value, are found.

"An ill wind that bloweth no man to good." At the time of our arrival at Nassau Dr. A. G. Mayer, Director, Department of Marine Biology, Carnegie Institution, was held stormbound aboard the yacht "Anton Dohrn" in the harbor. It would be difficult to find a man better informed as to the location and character of coral reefs in the Bahamas. We had the full benefit of Dr. Mayer's advice. At the end of May when the storm subsided

our plans had been made and we were ready to start for the reefs.

Corals are strictly carnivorous. Their food consists of minute organisms floating in the ocean. All reef-forming corals inhabit waters which do not sink below a temperature of 68° F., a condition to be found only in a belt about 1,800 miles wide on both sides of the equator. Increasing depth of water naturally is accompanied by decreasing temperature and this controls the depth at which corals—at least the reef-forming kinds—can grow. On the famous "Great Barrier Reef" of Australia, beautiful, though fragile corals flourish at a depth of fifty feet or more, but in the Bahamas reef corals do not thrive in water deeper than twenty feet. Detrimental to growth, furthermore, are impure water and a bottom covered with sand or mud. The comparatively few species adapted to life at a great depth cannot exist at the surface.

Essential then to the luxuriant growth of corals are the following conditions: pure sea water, a warm temperature, clean, rocky bottoms, and strong ocean currents liberally supplied with small organisms which serve for food.

New Providence, while supporting the largest population, is one of the smaller islands of the Bahamas group. It is somewhat oval in contour and about twenty miles long from east to west. On the north or harbor side the island is approached closely by the deep New Providence channel and it is here, one to two miles off shore with the waves constantly dashing over them, that the reefs have formed. On the south side corals are few and the shallow sandy flats extending for miles from the shore are known as sponging grounds. Constant fishing has threatened to exhaust the supply and for this reason a closed season has been declared.

June first and second were devoted to tours of inspection during which New Providence was circumnavigated





Grey rocky ledges, the principal shore formation, undermined by the waves, honeycombed by worms and boring shells, and worn into fantastic and sharp ridges, contained numerous tide pools, alive with brittle stars and short spined sea urchins.

and all the principal reefs examined. The finest coral formations were located at Sandy Cay (pronounced key) ten miles east of the Island and at Goulding Cay near the western point, where the magnificent specimens of brain and staghorn coral on exhibition in the Museum were collected in 1903.

While Goulding Cay excelled in the size of individual specimens, Sandy Cay offered a larger number of species, so arranged naturally, as to suggest an excellent model for reproduction in the Museum. For this reason as well as for its greater accessibility the latter locality was selected.



Typical Mangrove swamp near shore west of Nassau.

Sandy Cay, with an area not exceeding two acres, stands a sentinel among a number of other larger Cays from which it differs by having a dense grove of cocoanut palms instead of the usual low, shrubby vegetation. Facing the ocean it is protected by a barrier reef against which the waves break

and foam, and cause branching corals of enormous size to twist and gnarl much like trees on a wind swept coast.

Turning to the dazzling beach on the opposite side of the Cay we look over a broad bay upon the waters of which colors of emerald, ultramarine and purple alternate in sharply defined lines and patches, each color indicating a change in tint and structure of the sub-marine floor. Thus a white, sandy bottom is indicated on the surface by light green; coral beds are indicated by ultramarine, and a floor covered by a species of short leaved eel-grass is indicated by purple. So dependable are these signs of color, that native pilots sailing their small schooners over the shallow bay always steer for the purple and green, thereby avoiding the dangerous coral beds beneath the blue.

It was in the more placid water of the bay and not on the barrier reef, exposed to the destructive forces of roaring breakers, that studies and collections for the sub-marine group were made. Water glasses which are simple wooden buckets with glass bottoms, strong, double iron hooks, such as spongers use, attached to poles ten feet long, and a row boat trailing behind the small launch or sail boat which brought us out, were important features of our equipment. The services of skilful oarsmen were indispensable in holding the row boat steady while we worked over a reef. In the crystal clear waters of the Bahamas objects at a depth of fifty feet can be seen distinctly by the aid of a water glass, placed an inch or more below the surface.

The reef which received our especial attention was grotto-like in formation and stood in water ten feet deep, its steep front facing the ocean. Words cannot describe adequately its beauty, its charm of color and form, and the variety of its life. The water glass reveals yellow and purple sea fans which wave among the light brown, white tipped branches of staghorn coral growing over the surface of the reef; attached to the sides near the bottom stand out,



Silk-cotton tree (*Ceiba pentandra*) showing effect of prevailing eastern trade wind. On the barrier reefs against which the waves break and foam, branching corals of enormous size twist and gnarl much like trees on a wind swept coast.

olive-green, the heads of brain coral. There are also smaller formations of bright yellow star coral, purple coral, rose coral, and sea ginger; intermingling with these over all parts of the reef are gorgonians, sponges and anemones in greatest diversity of color and form. Silhouetted against the white sandy floor lie sea stars, orange and brown, and clinging to the rocks, black and forbidding, are sea urchins, the long brittle spines of which we soon learn to avoid.

One is likely to think of worms as squirming, repulsive creatures, but this is not the rule on a coral reef where, indeed, some worms are called "sea flowers." One of these shows only the rosette-like head above its gallery in the coral rock; another which lives in colonies and constructs stem-shaped tubes to protect its soft body, displays feathery gills so arranged as to resemble a morning glory.

A coral reef without coral fishes would be incomplete.

The name "coral fish," while usually applied to all the bright colored fishes of tropical waters where corals grow, in the restricted sense refers to the members of two families—Chætodontidæ and Pomacentridæ, all of which are much compressed, high-backed fishes of brilliant hues. Popularly many are known as angel fish and parrot fish—the latter name for their horny parrot-like beaks. Small shell fish and the living polyps of corals furnish their food. Coral fishes, though small, are excellent eating. They are captured in large wire traps, constructed somewhat like a rat trap, and shell fish is used for bait. To catch them with a hook and line is difficult, for their small, horny mouths offer no hold for the hook. An interesting feature concerning these fishes is the fact that many appear to have a fixed abode. Thus on the reef in Sandy Cay Bay time and time again we observed two yellow angel fish, swimming to and fro among the sea fans and corals and then, becoming alarmed, dashing for the protecting branches of a certain staghorn coral of large size.

A coral reef, to be seen at its best, should be visited during the rising tide. It is then that the star-like polyps of velvety softness unfurl their stinging tentacles and with open, rapacious mouths face the swirling currents, swarming with myriads of microscopic animals. G. P. E.

NOTES

In accordance with a revision of the Constitution of the Brooklyn Institute of Arts and Sciences the entire conduct of the Brooklyn Museums has been placed in the hands of a committee, to be known as the Governing Committee of the Museums, the members of which are appointed by the President of the Board of Trustees. The committee consists of: Colonel Robert B. Woodward, Chairman, Mr. Luke Vincent Lockwood, Mr. Samuel P. Avery, Mr. Edward C. Blum, Doctor George W. Brush, Mr. Walter H. Crittenden, Mr. John Hill Morgan, Mr. George D. Pratt, Mr. Herman Stutzer.

The first meeting of this committee was held on Monday, February first. As a result of this reorganization there are at present three departments of the Brooklyn Institute of Arts and Sciences, the Department of Education, Mr. Charles D. Atkins, Director; the Department of the Botanic Garden, Doctor C. Stuart Gager, Director; and the Department of Museums, Mr. William Henry Fox, Director.

A special exhibition of fifty-one paintings by George Hitchcock, loaned by Mrs. Hitchcock, was held at the Museum during the month of November.

An Accessions Exhibition has been one of the centers of interest at the Museum during the past month. The exhibition which comprises all accessions received by the Department of Fine Arts during the past year has proved so successful there is no doubt that similar exhibitions will appear in the department annually.

The Museum has received its share of the material secured in Egypt during the winter of 1913-1914 by means of the Egypt Exploration Fund. These collections consist of one hundred pieces excavated at Abydos and Sawam

In the Department of Fine Arts the following recent accessions have been received: bronze buffalo by A. Phimister Proctor, and a bronze group, "Lion and Buffalo," by Carl E. Akeley, gifts of George D. Pratt; painting, "Lilac Kimono," by Samuel Isham, presented by the Estate of Samuel Isham; painting, "The Reading of the Will," by Luigi Busi, given by Martin Joost; paintings, "Marine," by Thomas Birch and "The Sheep Fold," by Albert P. Ryder, given by A. Augustus Healy; a stained glass window by John La Farge, given by Herbert L. Pratt; two drawings: one by F. O. C. Darley, the other by William Blake, given by W. A. White; a drawing, an autograph letter and a wash drawing by J. Francis Murphy, given by E. C. Blum; a polychrome terra-cotta plate from the Island of Bornholm given by Doctor Axel Hellrung through William A. Putnam; six oil paintings by Albert P. Ryder, and one painting by John Singer Sargent, obtained by purchase; ten drawings by early French Masters, lent by E. M. Hodgkins; five mediæval wrought iron pieces, and two wood carvings: a Madonna and Child, fifteenth century, and a Monk, eighteenth century, secured in Spain by Mr. A. Augustus Healy and purchased from the

Museum Collection Fund of 1914; thirty-four pieces of Egyptian Antiquities received from the British School of Archæology in Egypt; and sixty-five enlargements of photographs of English Churches taken by Professor William H. Goodyear in Constantinople, charged to the Loeser Fund,

Among the recent accessions in the Department of Natural Science are the skins of a timber wolf and of other animals, the gift of the New York Zoological Society, and a number of skins of the Panda, a rare Asiatic fur-bearing mammal, the gift of Mr. E. LeGrand Beers. A mounted specimen of the Panda was placed on exhibition lately in the Hall of Vertebrates. Several gifts also have been received from the new "Zoo" in Prospect Park.

The course of lectures arranged for the early winter by the School Art League in coöperation with the Museum has been completed with most encouraging results. Following are the lectures for elementary pupils given in this course at the Museum: November 14, A Venetian Boat Ride, by Mr. Henry E. Fritz; November 28, Donatello, by Mr. Henry E. Fritz; December 12, Indian Stories, by Mrs. M. B. Morris. The lectures in the course arranged for the older members of the League were: November 7, Landscape Painting from Constable to Van Gogh, by Mr. Leon Dabo; November 21, Decorative Principles and Problems, by Mr. Henry J. Davison; December 19, Social Service in Art, by Mr. Gutzon Borglum.

Following are the lectures arranged and given in the regular course at the Museum: November 5, Animal Communities, by Mr. Robert Cushman Murphy; November 12, The Art and Poetry of Stained Glass, by Mr. Clement Heaton; November 19, The Bahamas, Coral Reefs and Coral Islands, by Mr. George P. Engelhardt; November 21, Submarine moving pictures: Thirty Leagues Under the Sea; December 3, Spain and Spanish Painting, by Mr. William Henry Fox; December 10, A Fight for the Preservation of American Birds, by Mr. T. Gilbert Pearson; December 17, A demonstration talk: How Pictorial Prints are Made, by Mr. Hugh M. Eaton.

A Print laboratory has been established in the Print Division, where any seriously interested person may "pull" his own etching, or "try out" other experiments, without charge, at the discretion of the librarian. The side press and all its accessories occupy a small room leading from the Print Gallery.

Possible uses of the work of the Docent are many and varied with new phases coming to light continually. Recently, a rather unique request for docent service was received from a Brooklyn woman who wished to make an hour in the Gallery of European Paintings part of her program for an afternoon's entertainment of the members of a certain Club. The afternoon was voted a success and three similar programs have been planned.

Apropos of the Museum's circulating picture file, the following extract from a recent number of "The Ledger" of the Commercial High School is interesting:

"THE ART IN THE LUNCH ROOM"

"A most agreeable surprise was given the students, when, entering the lunch room one noon, they saw many pictures adorning the walls. These pictures were secured by The Ledger, in conjunction with Mr. Greenberg of the Art Department, from the Brooklyn Museum of Arts and Sciences. They are reproductions of the best work of our American painters, and the purpose of their installation in the lunch room is to elevate art in the school. It is pleasing to note that the walls of our lunch room, for the time being, at least, are more pleasing in appearance."

The Museum has issued recently numbers 3 and 4 of the second volume of the Science Bulletin. The former, by Doctor Frank Overton, is one of the Long Island fauna series and treats of the frogs and toads. It contains much original information and is illustrated by fifty remarkable photographs. The other bulletin is entitled "A Report on the South Georgia Expedition." It comprises papers by ten specialists and relates chiefly to the invertebrate collections of the Museum's recent expedition into the subantarctic Atlantic.

Mr. George P. Engelhardt represented the Museum at the meeting of the American Association for the Advancement of Science held at Philadelphia during the last three days of the year. During the course of the meeting Mr. Robert Cushman Murphy, Acting Curator of Natural Science, and Mr. George P. Engelhardt, Curator of Invertebrates, were elected Fellows of the Association.

Mr. William A. Putnam has presented to the Library a copy of the exhaustive and out-of-print catalogue of "The Etched Work of Whistler," compiled by Edward G. Kennedy, and published by the Grolier Club. It consists of one volume text and three volumes of plates, in collotype, of the different states of the plates.

This catalogue, together with the catalogue of the Whistler Lithographs, recently added to the shelves, make the identification of Whistler prints an easy matter to the collector.

A Pen and Ink Drawing of "Obey and His Mother," by E. W. Kemble, has been presented by Mr. W. G. Bowdoin.

Among recent book accessions are: Thomas Say's "Insects of North America," 2 v; Tarr & Martin's "College Physiography"; Shimer's "Introduction to the Study of Fossils"; "Three Essays on Oriental Painting," by Sei-iche Taki; Auscher's "Comment reconnaitre les Porcelaines et les Faiences"; Grinling Gibbons' "Woodwork of his Age", and Newhall's "Minor Chateaux and Manor Houses of France."

The
BROOKLYN MUSEUM QUARTERLY

Index to Volume II.

April 1915 to October 1915

An illustrated magazine published quarterly, devoted to subjects of interest in Fine Arts, Ethnology, and Natural History, with special emphasis upon the activities of the Brooklyn Museum and its influence as an educational institution.

BROOKLYN, N. Y.
The Brooklyn Institute of Arts and Sciences

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CENTRAL MUSEUM

OF

THE BROOKLYN INSTITUTE OF ARTS AND SCIENCES

Eastern Parkway and Washington Ave., Brooklyn, N. Y.

The Museum is open from 9 A. M. to 6 P. M., Monday to Saturday (inclusive). Thursday evening, from 7.30 to 9.45. Sunday afternoon from 2 to 6. The Museum is free to the public, except on Mondays and Tuesdays, when the admission is 25 cents for adults and 10 cents for children under 16 years. Free on all Holidays even when these fall on Monday or Tuesday; free to teachers with their classes at all times, including pay days.

The Museum Library containing more than 20,000 volumes is open for reference daily from 9 A. M. to 5 P. M.—Sundays from 2 to 6 P. M.

The publications of the Museum comprise the Annual Report, Memoirs of Art and Archæology, Memoirs of Natural Sciences, Science Bulletin, Catalogues and Guides relating to the collections on exhibition.

To Reach the Museum: From Manhattan; Subway Express to Atlantic Avenue, thence by St. John's Place car to Sterling Place, or by Flatbush Avenue car to Prospect Park and Eastern Parkway.

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PUBLICATIONS OF THE MUSEUMS
OF
THE BROOKLYN INSTITUTE OF ARTS AND SCIENCES

ANNUAL REPORTS.

Reports upon the Condition and Progress of the Museums, 1904 to date.

MUSEUM NEWS AND QUARTERLY.

Children's Museum Bulletin. October 1902-March 1904. *Out of Print.*

Children's Museum News. April 1904-March 1905. *Out of Print.* [New Series] October 1913, to date. Monthly from October to May.

The Museum News, issued monthly from October to May. Volumes 1 and 2, 1905-1907. *Out of Print.* Volumes 3-8, 1907-1913. Gratis upon application to the Directer, Central Museum, Eastern Parkway, Brooklyn, N. Y.

The Brooklyn Museum Quarterly. Volume 1, March 1914-January 1915; Volume II, April 1915-October 1915.

The following publications are issued at irregular intervals, and present the original researches of the Curators and Assistants of the Museum, and work by specialists based upon the Museum Collections.

MEMOIRS OF ART AND ARCHAEOLOGY.

Each Memoir is a complete publication and is for sale individually. Orders for purchase may be addressed to the Librarian, or to the Macmillan Company, 66 Fifth Avenue, New York. Exchanges and correspondence regarding exchanges may be addressed to the Librarian, Central Museum, Eastern Parkway, Brooklyn, N. Y.

Vol. 1, No. 1, Renaissance leaning Façade at Genoa. By W. H. Goodyear. Text figures. Oct. '02 ..... $0.50

No. 2, Architectural Refinements at St. Mark's at Venice. By W. H. Goodyear. Text figures. 31 Dec. '02 ..... 1.50

No. 4, Vertical Curves and other Architectural Refinements in the Gothic Cathedrals and Churches of Northern France. By W. H. Goodyear. Text figures. 26 April, '04 ..... .50

MEMOIRS OF NATURAL SCIENCES.

Vol. 1, No. 1, Medusæ of the Bahamas. 7 pls. By A. G. Mayer, 20 May, '04 ..... $1.00

SCIENCE BULLETIN.

Each volume of the Science Bulletin contains about 400 pages of printed matter or about 325 pages accompanied by 50 plates. Each number of the Science Bulletin is sold separately. The subscription price is $3.00 per volume, payable in advance. Subscriptions should be sent in care of the Librarian of the Brooklyn Museum, Eastern Parkway, Brooklyn, New York.

Vol. 1, No. 1, Variations of a newly-arisen Species of Medusa.
By A. G. MAYER. 2 pls. 26 Apr. '01 ..... $0.25

No. 2, Effects of Natural Selection and Race-tendency upon the Color-patterns of Lepidoptera. By A. G. MAYER. 2 pls. 1 Dec. '02 ..... .75

No. 3, Atlantic Palolo. By A. G. MAYER. 1 col. pl. 13 Jan. '03. .25

No. 4, Orthoptera from Southwestern Texas. By A. N. CAUDELL. 2 pls. 30 Dec. '04 ..... .15

No. 5, Mammals from Beaver County, Utah. By J. A. ALLEN. 30 Mch. '05 ..... .10

No. 6, Additions to the Coleoptera of the U. S. with Notes on known Species. By CHAS. SCHAEFFER. 31 Mch. '05 ..... .10

No. 7, Some additional New Genera and Species of Coleoptera found within the Limit of the U. S. By CHAS. SCHAEFFER.
List of Bombycine Moths from the Huachuca Mountains, Arizona. By CHAS. SCHAEFFER.
Descriptions of some New Moths from Arizona. By H. G. DYAR.
30 Dec. '05 ..... .25

No. 8, Species of Birds collected at St. Mathews Cocoa Estate, Heights of Aripo, Trinidad. By GEO. K. CHERRIE.
Descriptions of N. A. Moths and Larvae. By H. G. DYAR.
List of Geometridae, collected on the Museum Expeditions to Utah, Arizona and Texas, with Descriptions of New Species. By R. F. PEARSALL.
14 Jul. '06 ..... .25

No. 9, On New and Known Genera and Species of the Family Chrysomel'idae. By CHAS. SCHAEFFER.
Hemiptera from Southwestern Texas. By H. G. BARBER.
12 Nov. '06 ..... .50

No. 10, New Bruchidae with Notes on known Species and List of Species known to occur at Brownsville, Texas, and in the Huachuca Mountains, Arizona. By CHAS. SCHAEFFER.
Feb. '07 ..... .25

No. 11, Notes on the Electrical Phenomena of the Vesuvian Eruption. April, 1906. By FRANK PERRETT.
Notes on the Eruption of Stromboli, April, May, June, 1907. By FRANK PERRETT. Dec. '07 ..... .25

No. 12, List of the Longicorn Coleoptera Collected on the Museum Expeditions to Brownsville, Texas, and the Huachuca Mountains, Arizona, with Descriptions of New Genera and Species and Notes on Known Species. By CHAS. SCHAEFFER.
Feb. '08 ..... .25

No. 13, Second Collection of Birds from Trinidad. By GEO. K. CHERRIE. Mch. '08 ..... .25

No. 14, New Great Horned Owl from Venezuela, with Notes on the Names of the American Forms. By HARRY C. OBERHOLSER.
Sept. 15, '08 ..... $ .10

No. 15, New Coleoptera chiefly from Arizona. By Chas. Schaeffer. Apr. '09. 25
No. 16, New Birds from the Orinoco Region and from Trinidad. By Geo. K. Cherrie. Jun. '09 10
No. 17, Additions to the Carabidæ of North America with Notes on Species Already Known. By Chas. Schaeffer. May '10 .25

Volume 2.

Vol. 2, No. 1, Long Island Fauna and Flora—I. The Bats (Order Chiroptera). By Robert Cushman Murphy and John Treadwell Nichols. June 21, 1913 15
No. 2, Long Island Fauna and Flora—II. A Long Island *Acmæa* and a New Variety of *Urosalpinx cinerea*. By Silas C. Wheat. July 16, 1913 10
No. 3, Long Island Fauna and Flora—III. The Frogs and Toads (Order Salientia). By Frank Overton, A. M., M. D. Nov. 3, 1914 25
No. 4, A Report on the South Georgia Expedition. By Robert Cushman Murphy. Nov. 5, 1914 25
No. 5, The Penguins of South Georgia. By Robert Cushman Murphy. Aug. 2, 1915 40
No. 7, A Contribution to the Ornithology of the Orinoco Region. By George K. Cherrie. In press. 1.75

CATALOGUES AND GUIDES.

Catalogue of the Collection of Pictures illustrating the Life of Christ, by James J. Tissot. 1901-'02 . . . . . $ .10
Catalogue of paintings. 1906, 1910, each 10
Catalogue of Ancient Chinese Porcelains loaned by Henry T. Chapman, [1907] 10
Guide to the Southwestern Indian Hall. 1907 05
Guide to the Exhibits illustrating Evolution, etc.; by F. A. Lucas, 1909. .05
Catalogue of the Avery Collection of ancient Chinese Cloisonnés; by John Getz; pref. by W. H. Goodyear. 1912 . . . . . paper 1.50
. . . . . cloth 2.00

MISCELLANEOUS.

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Some Books upon Nature Study in the Children's Museum Library, compiled by Miriam S. Draper, 1908; second edition 1911.
Some Nature Books for Mothers and Children. An annotated list; compiled by Miriam S. Draper, 1912.

COLD SPRING HARBOR MONOGRAPHS.

The Museum also distributes the Monographs of the Marine Biological Laboratory at Cold Spring Harbor, Long Island, of which seven numbers have been published to date.

THE
BROOKLYN MUSEUM QUARTERLY

VOL. II. APRIL, 1915 No 1.

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MOTHER AND CHILD, NO. 2

By JAMES McNEILL WHISTLER

From a lithograph in the Canfield Collection, a recent gift to the Brooklyn Museum by the Rembrandt Club.

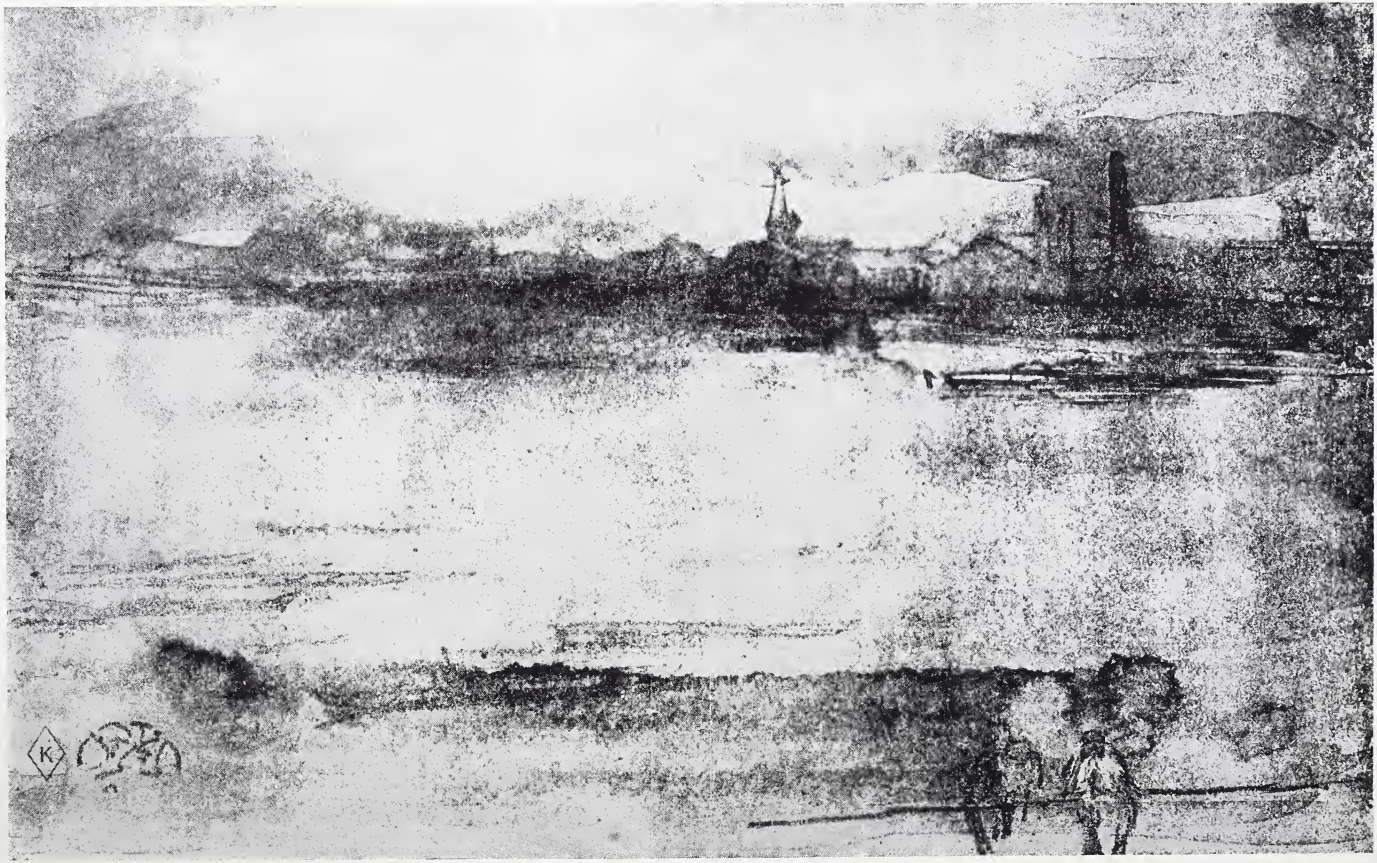
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THE WHISTLER LITHOGRAPHS AT THE BROOKLYN MUSEUM

REMBRANDT CLUB'S GIFT OF THE CANFIELD COLLECTION.

SUPERLATIVES are monotonous and often not convincing. Yet sometimes they are all our language affords to express real enthusiasm. Such is the involuntary feeling one possesses on realizing that through the generosity of the Rembrandt Club, the magnificent Whistler lithographs of the late Richard Canfield are with us to stay and that here in the Brooklyn Museum are to hang forever fifty examples of the lithographic art which are unsurpassed in all the world. A sweeping remark, you say. Yes—but equally as true; for when you note their beauty and realize their authorship it is easy to believe that you will accept the statement without contradiction.

Lithography as an art was in its infancy when first introduced to Whistler, in 1878, by his friend and publisher, Mr. Thomas Way. To be sure, Corot, Raffet, Daumier had previously made use of the medium and Fantin-Latour had adopted it in expressing graphically emotions which music inspired in him. Whistler undoubtedly knew this and sensed the fitness of this form of art for much in Nature and Life that he loved to portray. Whatever his hopes or fears, his facility of touch and carefulness of execution brought at once really amazing results. He was so encouraged that he thought of issuing to subscribers a limited number of impressions under the title of Art Notes. The public, however, as "publics" will, gave him no support and the idea was soon abandoned. The experience seemed temporarily to kill his interest, too, for he did nothing in this line during nine years—until 1887. From then until shortly before



EARLY MORNING

By JAMES McNEILL WHISTLER

Etching and lithograph in the Canfield Collection, a recent gift to the Brooklyn Museum

his death his interest in the medium revived and he brought out, from time to time, much of his more important lithographic work.

An imaginary collection of the best of these masterpieces would contain nearly all now shown on the walls of the Museum's Print Room. You can better judge the truth of this remark when you realize that, according to the latest catalogue, Whistler executed only one hundred and sixty-six prints and one-third this number, including a large majority of the best subjects, are found in the Rembrandt Club gift. To describe them all is to take away from the pleasure of seeing them, and to describe any is a task not easy. For lithography, properly practised, is an excessively delicate art and many of Whistler's lithographs accentuate this elusive effect.

> "*Oh, the little more, and how much it is!*
> *The little less, and what worlds away!*"

applies most aptly to the lithographs of Whistler. There is in them all a technique and feeling which we uninitiated may not fathom to its utmost but at least we realize that it cannot be improved upon, either by addition or subtraction.

Take, for instance, one of the most important of the Museum collection and one of the widest known, the "Early Morning." It defies accurate description. You can feel its mystery, its shadows, and its tender quality, yet you cannot analyze it. And perhaps it is better that you cannot, for its appeal is as varied as the impressions of each who looks upon it with intelligence. Mr. Wedmore says—"It is faint—faint—of gradations the most delicate, of contrasts the most striking—a gleam of silver and white,"—and we can quite agree with him in his description. In 1896 Whistler's wife was taken seriously ill and the couple were forced to spend months at the Savoy Hotel. From the windows of his rooms the artist executed a number of drawings, some of which rank among the very best of his lithographs. "Savoy Pigeons" is one, "Charing Cross Railway Bridge" another, "Little London," too, and finally "Even-



WATERLOO BRIDGE

By JAMES McNEILL WHISTLER

From a lithograph in the Canfield Collection, a recent gift to the Brooklyn Museum by the Rembrandt Club.

ing—Little Waterloo Bridge." There is a certain vagueness about this last, a mysterious atmosphere that haunts you the more you look upon it. Now we know what the master meant and felt when in his lecture "Ten O'clock" he said:—

"And when the evening mist clothes the riverside with poetry, as with a veil, and the poor buildings lose themselves in the dim sky, and the tall chimneys become *campanili*, and the warehouses are palaces in the night, and the whole city hangs in the heavens, and fairy-land is before us—then the wayfarer hastens home; the working man and the cultured one, the wise man and the one of pleasure, cease to understand, as they have ceased to see, and Nature, who, for once, has sung in tune, sings her exquisite song to the artist alone, her son and her master—her son in that he loves her, her master in that he knows her."

Whatever may be said about his personal relations Whistler never lost his head in his art. Although many of his subjects in lithography were of busy, crowded foregrounds—as for instance, "Little London" or "Charing Cross Railway Bridge"—the artist seems to have an occult power for choosing just what should appear, just what should be emphasized and just what should be eliminated. Of course that obstacle presents itself to any maker of landscapes but, most of all in lithography, the problem appears especially difficult. Here the effort is for spontaneity, crispness, sincerity; and yet how easy in trying to be truthful, it might be to turn out dull! We know from Whistler's friends that none of his work was hasty, that on his lithographs he spent infinite time, pains and thought. Yet for all that, double the amount of time and pains would have gone for naught, had he not possessed an unsurpassable genius for the work. "What was significant in the personality of Whistler—says Mr. Kennedy—may be summed up in the statement that to his finger-tips he was an artist." The remark obviously holds true in lithography, as well as in oils, etching and pastel.

In 1895, or just before the serious illness of his wife and the enforced stay at the Savoy Hotel, Whistler made a trip to Lyme Regis. His short visit there inspired him to execute a number of prints and some of these are included in the Museum collection. "Little Doorway, Lyme Regis,"



THE HOROSCOPE
By JAMES McNEILL WHISTLER
From a lithograph in the Canfield Collection, a recent gift to the Brooklyn Museum by the Rembrandt Club.

for instance, and "Sunday, Lyme Regis," "The Fair, Lyme Regis," etc. These subjects are frank, joyful impressions that were drawn by the artist, not because he was striving for some obtuse effect, not because he felt forced to do them, but because he revelled in the task. "For Art and Joy go together, with bold openness, and high head and ready hand—fearing naught, and dreading no exposure." Was Whistler

thinking of his Lyme Regis prints when he wrote that? Obviously not, because it was written some ten years before, but nevertheless it expresses beautifully the feeling that the series inspires.

One cannot discuss the lithographs of Whistler without laying especial emphasis upon his figure and *genre* subjects. Yet a certain hesitancy comes to anyone who approaches the task in seriousness, since now we arrive at what many believe to be the very finest. And deservedly so. What lithograph in the world can surpass "The Horoscope"? For grace, for symmetry, for exquisite texture this print cannot be outdone. It is pushing lithography to the limit of its powers as a mode of artistic expression. It is a masterpiece. In many ways just as fine, is the "Mother and Child" and very wonderful, too, are "The Draped Figure Seated," "The Little Draped Figure" and the "Nude Model Resting." In fact the great weakness of this collection from a pessimist's point of view is that it is all so uniformly strong! The waves are all crests. There are no troughs.

The beauty of the prints cannot be realized by merely cataloguing their merits. "Seeing is believing" and not one sight but many. Art of this character does not always carry its message on its sleeve. We must be friends with it, intimate friends, in order to appreciate deeply its quality and its joy. And when we get to know more about the masterpieces of lithography as well as of the technique of the art itself, we can better realize the generosity of the Rembrandt Club for its gift. Brooklyn art lovers can be thankful for many opportunities, but none more rich exist, to lovers of lithography, than this chance to study at leisure the very best examples of the art by the master of them all.

E. G. D.

A SOJOURN IN THE PRIMEVAL OKEFINOKEE.

'THE river St. Mary has its source from a vast lake, or marsh, called Ouaquaphenogaw, which lies between Flint and Oakmulge rivers, and occupies a space of near three hundred miles in circuit. This vast accumulation of waters, in the wet season, appears as a lake, and contains some large islands or knolls, of rich high land; one of which the present generation of Creeks represent to be a most blissful spot of the earth: they say it is inhabited by a peculiar race of Indians, whose women are incomparably beautiful; they also tell you, that this terrestrial paradise has been seen by some of their enterprising hunters, when in pursuit of game, who being lost in inextricable swamps and bogs, and on the point of perishing, were unexpectedly relieved by a company of beautiful women, whom they call daughters of the sun, who kindly gave them such provisions as they had with them, which were chiefly fruit, oranges, dates, &c. and some corn cakes, and then enjoined them to fly for safety to their own country; for that their husbands were fierce men, and cruel to strangers: they further say, that these hunters had a view of their settlements, situated on the elevated banks of an island, or promontory, in a beautiful lake; but that in their endeavors to approach it, they were involved in perpetual labyrinths, and, like inchanted land, still as they imagined they had just gained it, it seemed to fly before them, alternately appearing and disappearing. They resolved, at length, to leave the delusive pursuit, and to return; which, after a number of inexpressible difficulties, they effected. When they reported their adventures to their countrymen, their young warriors were enflamed with an irresistible desire to invade, and make a conquest of, so charming a country; but all their attempts have hitherto

proved abortive, never having been able again to find that enchanting spot, nor even any road or pathway to it; yet they say that they frequently meet with certain signs of its being inhabited, as the building of canoes, footsteps of men, &c.'

These words from the celebrated 'Travels' of William Bartram, the early American botanist, embody the atmosphere of legendary mystery and superstition that enshrouded Okefinokee Swamp over a century ago, and that lingered about it in a remarkable degree almost to the present day. Meanwhile, this great natural feature of southeastern Georgia has kept growing ever richer in historical and literary associations. Chronicles of the Indian Wars, historical works of colonial times, United States Senate Documents, state reports of Georgia, stories of Confederate deserters, tales of fiction, Maurice Thompson's essays—all these, and more, have contributed to the enduring fame of the Okefinokee. Thompson fittingly speaks of it as 'one of those great gloomy swamps...in southeastern Georgia, so repellant and yet so fascinating, so full of interest to the naturalist, and yet so little explored.'[1] Though parts of the Okefinokee have been visited by a few men of scientific interests within the last forty or fifty years, and by hunters for a much longer period, it has nevertheless remained to the world at large a virtual *terra incognita*—a place of mysteriousness and fancied terrors.

It was therefore with no slight feeling of exhilaration that I found myself, early on a morning in May, 1912, in a little party approaching the northern borders of the great swamp. A kindly 'cracker,' who had extended to us the modest hospitality of his cabin on the previous evening, when we

1. By-ways and Bird Notes, 1885, p. 23. See also 'An Archer's Sojourn in the Okefinokee' (Atlantic Monthly, April, 1896, pp. 486-491), which treats of an experience in the environs of the swamp rather than within it. For some strange reason Thompson failed to enrich our literature with an account of the inner beauties of the Okefinokee, which he saw for himself on a trip to Billy's and Honey Islands with his brother in 1866. After the lapse of nearly half a century, however, this lack has been most fortunately supplied by Will Henry Thompson in his 'Deep in the Okefinokee Swamp' (Forest and Stream, May, 1915, pp. 298-302 and June, 1915, pp. 337-339).

had left the train at the little station of Braganza, was conducting us with a mule and wagon through the open pine forest that encompasses the Okefinokee. But riding upon the wagon was not to be thought of on such a morning, when a bright sky smiled upon us, and a breeze from over the swamp murmured in the tree-tops. New bird voices constantly lured me ahead along the cart-path, or aside into the low undergrowth of saw-palmetto. In the distance several Bob-whites piped cheerily, and Chimney Swifts ('Chimney Sweepers,' our host called them) circled on rapid wings above the trees. Bluebirds, Purple Martins, Crested Flycatchers, Cardinals, Flickers, a Wood Pewee, a Brown-headed Nuthatch, and a Mourning Dove were some of the old acquaintances that I was glad to see in a new environment. But I believe I never became fully accustomed to the presence of the Southern Meadowlarks among the pines; they seemed so strangely out of place in a forested haunt, open though it was. From the swampy thickets of cypress and bay that we passed here and there, came the liquid, ringing notes of the Prothonotary Warbler, the trill of the Parula Warbler, and the blithe song of the Carolina Wren. An unfamiliar voice, but perhaps the finest of all, was that of the Pine-woods Sparrow, whose sweet chant sounded far through the woods, while its author remained invisible in its favorite haunt among the palmettoes. A gorgeous Pileated Woodpecker tapping upon a stump, a soaring Sandhill Crane, and numbers of herons winging their way above the trees in the direction of the swamp, gave promise of still finer sights that the interior might have in store for us.

The morning was less than half done when our six-mile wagon journey ended at Cowhouse Landing. The pines gave way abruptly at the water's edge to a belt of cypress, and the still depths of the great Okefinokee stretched before us.

In a cluster of young cypresses lay a boat of good proportions, with its bow raised high upon a log, which served as a

mooring; and among the slender branches of the saplings rested the paddles and the forked sticks for poling. But our faith in the craft received a rude shock when, at the moment of launching, the swamp water welled up freely through its bottom. During a vexatious but enforced halt we gathered resin from the near-by pines, boiled it over a little fire of 'light-'ood knots,' and poured the pitchy mass upon the more conspicuous of the cracks. The sun was near the



The Cowhouse 'Run'.

zenith when, at length, we three loaded the baggage with care, and embarked. From his position in the bow Dave was to guide us over the tortuous water trail, through unblazed cypress 'bays' and wide expanses of 'prairie,' to Billy's Island. Wood stationed himself amidships, where he could bail to the most advantage (and there was no small need of industrious application to the task). From the

stern I seconded, as best I could, Dave's masterful handling of pole and paddle.

Through a slight gap in the thickest of the tree belt bordering the mainland, our trail led by degrees into a region of open glades—the very fairest part of the Cowhouse 'Run,' whose name, perhaps, does not exactly suggest its loveliness. The run passes between lines of cypresses, from which hang long festoons of Spanish moss (*Tillandsia usneoides*), gently swaying in the breeze and half concealing the trunks of the trees. Vistas are disclosed of glade after glade, fringed on all sides by slender files of the cypress, and of a beauty so exquisite as to appear almost supernatural. Every part of the open, save the run, is occupied by the far-spreading sphagnum, in which Dave pointed out many a winding otter trail, and here and there a wider furrow that marked an alligator's course. The luxuriant blades of the 'fire-leaf' (*Orontium aquaticum*) in the run almost shut out a view of the water's surface, and they rustle and scrape along the sides of the boat as a vigorous thrust of a forked stick drives it onward.

What hours we spent in plying those lithe poles during the next fortnight, as we navigated the Okefinokee waterways! Out of cypress saplings Dave fashions them: he cuts off a length of ten feet, trims it to a dimension combining strength and lightness, and carves a broad, triangular end, slightly notched, out of the sapling's swollen base. Such is the 'forked stick' of the Okefinokee. With it the native secures a fair purchase against the boggy bottom, and standing in the stern of his boat and stooping rhythmically to his task, he pushes over the lily-grown prairies, hour after hour, at a rate that an oarsman in open water would scarcely equal.

In a slightly wider and deeper part of the run, which is distinguished by the name of Mud Lake, we mistook our course for a time, having overlooked the narrow opening in the 'hurrah bushes'[1] through which the trail for Billy's

1. The natives give this curious name to two shrubs of the swamp, *Leucothoë racemosa* and *Pieris nitida*.

Island turns aside. We were led astray perhaps by our interest in a female Wood Duck that sprang up in front of the boat, and whose hoarse quacks seemed to us to betray solicitude for a brood of young hiding in the thick cover of the 'bonnets' (yellow pond-lilies, *Nymphæa macrophylla*). This beautiful duck, like several other birds that have almost disappeared from the more settled parts of the country, still finds a quiet refuge in the fastnesses of Okefinokee.

Presently, after passing on our right a group of particularly tall slash pines, we pointed our boat's prow toward



'A vast and open morass.'

another pine that towered above the far southern horizon. These 'saplin's' (for in the native speech every pine in the swamp, be it ever so tall, is a 'saplin'') serve as familiar landmarks for Dave and his brothers in their journeys between Billy's Island and the northern border of the swamp. The absence of blazes deters outsiders from attempting to follow the trail far into the interior, and gives the Billy's Island folk a sort of unique proprietorship over these solitary wastes. We found ourselves here in the midst of a vast and

open morass, such as the natives call a 'p'rairie.' The leaves of the white water-lily float in myriads over the deeper water, and their snowy blossoms gleam above the surface. Maiden cane, arrowhead, arrow-arum, pickerel-weed, and sphagnum crowd the shallower parts with a rank growth. The trees bounding the horizon are those that flourish in a watery haunt, and as far as the eye can wander in any direction, there is no indication of *terra firma*. No devotee of virgin nature, in looking upon such a scene for the first time, could fail to be moved by its grandeur and utter wildness.

But to Dave these surroundings were perfectly familiar. Born and reared in the heart of the swamp, he had never traveled far or long beyond its borders, and was unspoiled by too much contact with the complexities of civilization. At nineteen he was an experienced bear-hunter, sturdy and resourceful, and well versed in the lore of the swamp. Few were the birds, animals, or even plants, for which he could not give us a name; and his deliberate answers attested the thoroughness of nature's schooling. When we found the warm water of the prairie none too refreshing a drink, Dave alone knew how, by creating a little whirlpool with his hand beside the boat, to draw cool water from the depths of a ' 'gator-hole.'

Our afternoon's progress was enlivened by the sight of seven or eight White Ibises far in our front. It was Dave's keen eyes, of course, that first spied the 'Curléws' (so called in the swamp vernacular), as in an orderly line above the cypresses they sped westward on strong and graceful wings.

But the finest ornithological treat of the day was the Water-Turkey. We were poling over a little prairie; its surface was thickly strewn with water-lilies, and at its sides rose a lofty wall of moss-garlanded cypresses. The slanting rays of the sun shed a glow upon the leafy surroundings, and gave the scene a colorful brightness and beauty that I saw scarcely equaled in any other part of the Okefinokee. Then from its perch at the edge of the open a great, long-

necked bird arose in a slanting course, and alternately flapped and sailed past us, while the striking black and white pattern of its back and wings gleamed against the green of the cypress. Another Water-Turkey, plunging headlong from a low, dead tree, struck the water with a splash and was lost to view. At home in both elements, this singular denizen of the swamp mounts into the air and soars in lofty circles, or cleaves its way for rods beneath the water's surface, now and then indicating its steady course by a shaking 'bonnet' stem.

In the late afternoon our boat emerged from a densely wooded portion of the run, and glided forth upon the silent stretch of the 'Big Water.' It seems as if here a long aisle has been made in the cypress forest, through which the gentle current of the most charming of all the Okefinokee waterways may flow. Its shoreless edges are lined with the 'hurrah bush' and the bay, and close behind rise the stately ranks of cypress. Its deep, dark waters shelter the jackfish, the bream, and the gamy bass; here, too, one may catch glimpses of the great saurian of the swamp, whose manner, since he has gained acquaintance with the hunter's modern firearms, is far less fierce than his looks.

Our forked sticks, now useless, were laid aside. Dave took the stern seat with the single remaining paddle (for the other had been unaccountably lost on the way), and by his well-directed strokes urged the heavily laden boat at a fair rate along the stream. Even from that position he pointed out to our unaccustomed eyes a dark, low-lying shape or two that crossed our course a hundred yards in front. The 'gators are as many feet in length, he said, as there are inches between eyes and nostrils; and since these are usually the only parts that are plainly visible above the surface, they offer a ready criterion of measurement. The Big Water appears to foster the growth of big 'gators, for those we saw could have been little less than twelve feet in length. Meantime, a male Wood Duck, winging swiftly upstream, exposed his ruddy breast to view as he passed over us, and uttered

his shrill little whistle, so different from the quack of the female. From far ahead the deep, booming cry of the Florida Barred Owl announced the approach of evening; and no other bird note could have embodied so well the spirit of wilderness solitude and freedom on the Big Water.

At the end of four or five miles the waterway again became more confined and more obstructed with 'bonnets' and other aquatic vegetation. After further work with our forked sticks, we passed through the Minne Lake Narrows, where Dave pointed out the former roosting places of Egrets, Ibises, and Water-Turkeys. The lake itself, like the Big Water, is simply a deeper and slightly wider part of the stream; and through this gloomy, canyonlike gap in the forest we hastened, as night settled upon us, to the foot of the lake.

Then, without a suggestion of warning, Dave commenced a weird, prolonged halloo—a sort of yodel, with measured cadences—that broke the stillness of the night and resounded afar over the swamp. Barely suppressing an exclamation of amazement, we listened while he gave once or twice again those remarkable notes. That, for the time, was all; no explanation was offered, and none was sought directly. In very truth, the mysteries of the Okefinokee had not all vanished. I came to the conclusion, however, that this must be some sort of a signal to the people on Billy's Island, notwithstanding the miles that separated us from them. And so it proved. In the days to come we were more than once to give heed to the deep, thrilling music of the 'Billy's Island yell,' flung forth and answered as some member of the family neared home from a distant trip; and finally we felt free to talk about it with them. One of Dave's older brothers, in referring to this incident, remarked, 'Well, Dave jest natcherly wouldn't 'a' *felt* right if he hadn't hollered when he wuz comin' in up yander at Minne's Lake. I guess we would 'a' hyearn 'im if we hadn't been asleep.' And, in fact, the sound often will carry to a distance that is nothing short of astonishing. In a well-established instance,

another of Dave's brothers, the acknowledged champion of the family, gave the halloo when at least six miles 'in a bee-line' from home; perhaps because of a favoring breeze, or because the trees in their bare winter condition offered less obstruction than usual to the sound waves, he was faintly and yet distinctly heard on Billy's Island. It may be worth while to remark that an outsider may endeavor long, and never succeed in giving even a fair reproduction of these wilderness notes. It seems as if one must be to the manner born, and practice from childhood on (for so we judged later, while listening to the continual yodelings of the little barefooted youngsters on the island).

We were now confronted by an immense cypress 'bay,'[1] whose dense gloom added greatly to the difficulties of the obscure and crooked run. For any one except a native, who knew every rod of the way, it would have been folly to attempt a nocturnal trip over the three remaining miles to Billy's Lake. But Dave was master of the situation. Taking a position in the bow again, he cast the rays of our bull's-eye lantern from side to side, and sought out the right openings in the tangled undergrowth. In many a place where the run became too confined for the free use of the paddle, we grasped a cypress knee or an overhanging limb, and by pushing or pulling forged slowly ahead. When the bushes scraped our faces or tugged at our hats, it was a trifle disquieting to recall the many cottonmouths and other snakes that we had heard during the day as they dropped into the water from their resting-places among the branches projecting over the run. Another Barred Owl challenged our intrusion into its 'ancient solitary reign' by booming forth its cry from a cypress above us, and responded from a still nearer perch to our imitative calls. Thus, for three extraordinarily long, wearisome hours, during which our boat more than once ran off the trail, we struggled through the swampy tangle, finally to emerge into a bonnet-covered

1. A 'bay' is a forest growing in water or on low ground, with evergreen shrubs predominating in the undergrowth.



The People of Billy's Island.



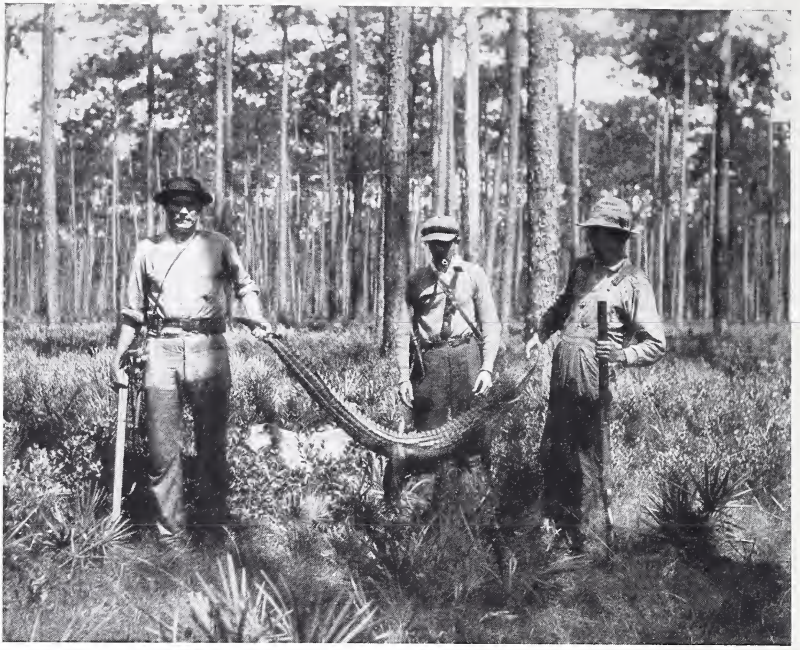
'Striking'—a common method of securing fish by night.

lagoon under a starlit sky. In another minute we had gained the open water of Billy's Lake, and with lighter hearts we turned our course eastward.

In the middle of the night, after twelve hours' continual work with pole and paddle, we made the landing at Billy's Island. The heart of the great Okefinokee at last!

We trudged up through the cornfield to Dave's home, in the yard of which we were greeted by the deep-throated bearhounds. The folks within the house arose to receive us, and despite our protests set before us food and drink for our refreshment. So true to tradition is Southern hospitality, even in a wilderness home of logs. With a blazing pine knot Dave then led the way to the single upper room of the sleeping compartment; and no feathery couch in the thronged communities of men could have been half so welcome as the mattress of straw, on a homemade bed, that received our worn-out limbs.

To look about us in the morning, and to observe unobtrusively the manner of life of the only human inhabitants of the remote interior of the Okefinokee, was a novel and extraordinary pleasure. In the lives of these sober, self-sufficient people is reflected the freedom of the wilderness, no less than its solitude and its privations. Thirty years ago the father and mother established a home on Billy's Island; and they and the ever-increasing numbers of the second and third generations have continued to draw a livelihood from the manifold resources of the swamp. The longleaf pines furnished the timbers of their dwelling; the sandy loam of the clearing produces their annual supply of corn, sweet potatoes, and several smaller crops, such as 'pinders' (peanuts) and sugar cane; and in the surrounding woods their cattle and razor-backed hogs find sustenance. But no inconsiderable part of their daily fare is derived directly from the wild life about them. Deer, raccoons, opossums, rabbits, squirrels, fish, soft-shelled 'cooters' (turtles), Wild Turkeys, Bob-whites, and many of the larger water birds are secured for the table whenever opportunity



The Alligator-hunters.



'We set forth into the bog.'

offers. The bears, whose depredations in some years prevent a suitable increase in the drove of razorbacks, are hunted with hounds and made to compensate with their own flesh for any deficiency in the supply of home-cured bacon. Not only does the family enjoy the product of the tame bees that swarm in upright sections of hollow cypress logs about the yard, but the young men gather probably an even greater store of wild honey from 'bee-gums' in the swamp. They market the skins of the alligator, the bear, the wildcat, and the otter, and get in trade the few necessities of life with which the Okefinokee itself does not furnish them.

A sojourn on Honey Island, whither we went after a few days, was spent amid primitive and picturesque surroundings. With Bryant and Joe, two alligator-hunters, we tramped for several hours through the sunny pine barrens to the southern extremity of Billy's Island. Between the two islands lies a mile-wide, watery stretch that goes by the somewhat misleading name of 'strand;' and when we set forth into the bog, it soon became of such a depth that the bearhounds with us half waded and half swam. Further on, when we had left the water-lilies of the open and entered an immense, swampy thicket, we frequently sank almost waist-deep into the holes of the uneven, root-entangled trail, or tottered here and there across a quivering bed of floating sphagnum. After consuming more than an hour in our struggle through the 'strand,' we emerged gradually upon the *terra firma* of Honey Island. Here a hunting shanty, set amid the straight, lofty trunks of the longleaf pines, became our temporary abode. An Indian mound before it reminded us of the aboriginal inhabitants who once pursued the deer in the surrounding forest. The smoke of our camp-fire drifted freely into the open doorway, and through the wide spaces between the smooth pine logs that formed the walls of the cabin. The roof was more compactly built, and its roughhewn shingles interposed a welcome barrier between us and the rain.

The level expanses of the piny woods on Honey Island were a continual invitation. My notebook records the following sights and sounds of a morning's stroll among them. 'A scene of perfect peace lies about me. I am resting on a partly burned log, and can look out between the straight columns of the pines for a quarter of a mile in almost any direction. On all sides the saw-palmettoes stretch forth their fans, the tops of which have been browned by an early spring fire. There are knee-high ferns, too, and many smaller plants with pink, blue, or white flowers. The big cones of the longleaf pine lie thick upon the ground. The sun is strong, but my seat is partly shaded, and now and then I feel the breath of a southerly breeze. Some cottony clouds float in a light blue sky. On the right a Pine-woods Sparrow is chanting its hymn; a Wood Pewee sings plaintively on a bough in front; and some Chimney Swifts circle and chatter above the pine tops. Yonder, at a little cypress-grown pond, a Carolina Wren and a Carolina Chickadee are singing; there, too, a Florida Grackle sits on a stump, discordantly croaking. The only other harsh bird notes are those of a couple of Kingbirds overhead. A frog, with a voice like a razorback's, is grunting in the swamp. From far off I just heard a Bob-white piping his name. Now a Red-bellied Woodpecker, the noisy fellow, is calling in the rear. Some Brown-headed Nuthatches were here at first, but for some minutes I have missed their dainty, finchlike notes. A Florida Yellow-throat has started to sing in the direction of the swamp; and now a Crested Flycatcher, perhaps the commonest Okefinokee bird, has chimed in.' Without moving from my seat, I had counted a dozen bird voices.

As I neared the end of the island, I thought I heard a faint and distant call like that of the Sandhill Crane. I went on, and presently, far ahead of me, four great brown birds started from the ground and gracefully winged out over the pines toward the prairie. I was glad indeed to

secure this glimpse of the 'Whooping Crane' of the Okefinokee, for it was one of the birds I had longed most to find in the swamp. Several times thereafter I was rewarded by the sight of a pair of the magnificent birds, but just as often I knew of their presence only by their ringing, trumpetlike notes ('the loud and shrill whooping of the wary sharp-sighted crane,' as Bartram aptly puts it).

Reluctant as we were to leave behind the delights of Honey Island, we could not go elsewhere in the swamp without meeting fresh and—to us—wonderful adventures. The snake that dropped from a bush into Dave's boat, the bear he stalked on the banks of the old logging canal, the huge 'gator, within ten feet of which we came by silent paddling at night, guided by the red glow of its eyes—of these and many other things that we saw or did on a trip to Chase Prairie, what tales could be told! And the prairie itself is possessed of a wondrous fascination, reminding one vividly of some of Wordsworth's lines, which were doubtless inspired by Bartram:

> *'The youth of green savannahs spake,*
> *And many an endless, endless lake,*
> *With all its fairy crowds*
> *Of islands, that together lie*
> *As quietly as spots of sky*
> *Among the evening clouds.'*

But let a bird-lover speak merely of a bird. Though Swainson's Warbler is not considered nowadays a great rarity, a peculiar interest attaches to this species in that it was almost lost to science for a period of more than fifty years after its discovery in South Carolina in 1832. It was while we were paddling up the west fork of the abandoned canal on our return journey to Billy's Island, that a wild, sweet song greeted us from the bordering thicket. It was the self-same song that we had heard there two days previously, when our haste to make camp before nightfall had not allowed us to stop; but now I stepped ashore and resorted to the 'squeak' in an endeavor to bring the singer into view.

For once this potent charm failed, and the bird, apparently unconcerned, kept on singing in the depths of the thicket. Presently, I hit upon the expedient of imitating the song itself—a rich but simple warble of half a dozen syllables. As if by magic, then, a bird appeared and afforded me the long-sought glimpse. It almost took my breath to see, not the brilliant Hooded Warbler that I had suspected was the author of the song, but a plain, olive-brown little bird, with yellowish breast and a white line over its eye. Swainson's Warbler! And what a red-letter day it made for me! There we gazed upon each other for some minutes, as long as I could linger, while the bird appeared to become excited at the supposed presence of a feathered rival, which it could not locate, and kept on answering the human imitation.

Above all others, however, the Ivory-billed Woodpecker is the *rara avis* of the Okefinokee. In only a few of the wildest and most densely forested parts of its former range in the Southern States does this gorgeous Woodpecker still find refuge. A true bird of the wilderness, peculiarly incapable of withstanding the swift advances of civilization, it seems inevitably doomed to the fate of the Great Auk and the Passenger Pigeon. Within the Okefinokee a few pairs are yet found on the remote and well-nigh inaccessible Minne Lake Islands; and thither Dave and I set out one morning. Leaving Billy's Lake, we struck north into an immense stand of cypress, knowing that somewhere within its depths lay our goal. By a little-used and little-known run we pushed a tiny boat, especially built for squeezing through narrow and crooked passages between the cypress knees. Now and then we halted to chop through a partly fallen tree that barred our way, or stepped out upon a log to lift our craft across it. Many a time we lost the trail, and cast about to pick it up again. And always the mighty cypresses shed upon us their oppressive gloom, except when here and there we skirted a rank bed of maiden cane and saw-grass in a little sunlit glade. The distant bellowing of alligators added to the savage wildness surrounding us.

After half a day's disheartening struggle through labyrinthine ways, we climbed a cypress in one of the glades in the hope of discerning the tops of the pines on the eagerly sought islands. But no such welcome sight rewarded our survey; on the contrary, an Osprey's nest in a dead tree a quarter of a mile to the east appeared strangely like the one at the foot of Minne's Lake. And so it proved when we made our way thither. We had been led astray by a fork in the trail, and the Minne Lake Islands were as far as ever out of our reach. Thus our quest for the elusive Ivorybill ended; no further attempt was possible, for on the morrow we had to begin our journey out of the swamp.

Our return to the northern border was somewhat more leisurely than the inward trip to Billy's Island. We pitched our tent on the first night among the 'loblollies' (*Magnolia grandiflora*) of Floyd's Island Hammock; and on the following day we had our last glimpses, or heard for the last time the songs, of a number of the birds whose homes are on the Okefinokee islands. We then poled laboriously over the shallow water and deep muck of Floyd's Island Prairie, and before dark reached the Big Water again. Here, on a sequestered bayou not far from the main stream, we sought a hunter's camp—a mere platform of logs 'on top of the swamp.' While we prepared there our evening repast, we listened with awed delight to such a savage sound as would surely fill the uninitiate with terror—the thunderous, roaring bellows of a great and near-by alligator of the Big Water. Thereafter it was not difficult to comprehend how Bartram could write upon a similar occasion, 'The earth trembles with his thunder. . . . The shores and forest resound his dreadful roar.'

Early morning upon the Big Water presents a scene of wilderness beauty that fairly entrances him who esteems the unspoiled domains of nature. From row upon row of stately cypresses the streamers of moss hang motionless, or now and then stir with the touch of a breeze. The 'bonnet' stems sway to and fro in the gentle current. A brood of Wood

Ducks ripples the surface of the stream, and far overhead two groups of Water-Turkeys slowly soar in circles. The Pileated Woodpecker beats a loud tattoo in the adjoining 'bay,' and the Florida Red-shouldered Hawk screams in the tree-tops. In the lower growth the Cardinal flashes his brilliance; there, too, the Carolina Wren makes merry, and the loud, sweet song of the Prothonotary Warbler rings out. As the boat is paddled silently on, we lure the bass and the bream from their retreat among the water-lilies.

Once more we pass Dinner Pond Lake, so curiously and yet euphoniously named, guide our course by the 'saplin's,'



The Big Water.

pole through the 'bonnets' of Mud Lake, and linger among the lovely glades of the Cowhouse Run. And we gain solid ground at last at Cowhouse Landing, leaving behind us not the terrors, but the glories, of the Okefinokee.

Whoever has beheld the manifold charms of this paradise of woods and waters, comes away fascinated and spellbound. Its majestic pines and cypresses, its peaceful waterways and lily-strewn prairies, together with the splendid wild creatures that inhabit them, should be safeguarded from the lumberman's despoiling operations. The primeval Okefinokee is worthy of national preservation. F. H.

THE EXHIBITION OF CONTEMPORARY AMERICAN PAINTINGS AT THE BROOKLYN MUSEUM.*

THE time which has passed since the opening of the exhibition of contemporary American paintings has been sufficient to confirm the impression obtained from the first view of the exhibition, and to strengthen the opinions then formed by reference to the published verdicts of Brooklyn and New York critics.

The personal impressions of the writer will be first mentioned, and some corroborations of these in other published verdicts will be found at the close of this article. There is an undeniable atmosphere of freshness and spontaneity about the exhibition, taken as a whole. It is not conventional, neither is it tiresome. Its relatively small dimensions (109 pictures), low single line hanging, and open spacing, are much in its favor, and the pictures are carefully toned as regards juxtaposition.

The new alcove arrangement, which divides the gallery into a series of eight separate divisions, is an indispensable feature of this last and most important merit. The list of artists, numbering seventy-eight, may be considered impeccable; not because all the best known living American painters are represented (for many of these are confessedly and obviously omitted), but because a very large number of

*Editor's Note. The substance of this article appeared originally in the Bulletin of the Brooklyn Institute of Arts and Sciences for April 17th. Its importance appears to justify republication, especially as it came from a Museum source. The article was written in the present tense, and its wording in that particular is retained. The impressions recorded in this paper, both in general results, and in particulars relating to individual pictures, have been very remarkably corroborated, and we may add—unanimously corroborated—by the reviews which appeared in the daily Press. Extracts from these, as regards general impressions, have been quoted in the addendum.

The Brooklyn Museum Exhibition of Contemporary American Paintings was advertised to continue from April 4th to May 3d. It contained one hundred and nine pictures, representing seventy-eight artists. The choice of these pictures was made by invitation, without reference to a jury.



PORTRAIT

From the Painting by WILLIAM J. BAER, purchased by the Brooklyn Museum from its recent Exhibition of Contemporary American Paintings.

the best-known American painters are included, together with a sufficient number of others, who are not so well-known, but who ought to be.

It is, however, by the choice of the paintings themselves that the exhibition must be mainly rated. Here it is impossible to avoid comparisons with recent exhibitions like that in the Philadelphia Academy of Fine Arts, the one now being held in the Academy of Design in New York, and a vast number of similar exhibitions in the past. When such a comparison is made, it is undeniable that the *relative* number of pictures which must be instantly admitted to be of the very highest rank and interest, is very much greater in Brooklyn. In fact, it is enormously greater. Suppose, for instance, that we enumerate a series of the portrait masterpieces now in Brooklyn, and then compare their number with the total number of paintings in the Brooklyn exhibition, and also with the total number of paintings now shown by the Academy, or recently shown in Philadelphia. The following pictures in Brooklyn are undeniably among the finest works of American art: the two portraits by Chase; the portrait by Cecilia Beaux; the young girl by Mary Cassatt; the standing figure by Eakins; the smaller picture by Eakins; the portrait of Dr. Collyer by Miss Mac Chesney; the large portraits by Betts and Ipsen; the portrait by Mora; the portrait of Bessie Potter by Vonnoh; the lady bending over a flower by Alexander. So far, we have portraits of notable and superb importance; life-size with one exception; pictures of which it may be said frankly that personal taste must stand aside, and bow to the greater wisdom of standard criticism. Here are eleven pictures in a total number of 109. If these eleven pictures were placed in the recent Philadelphia exhibition of 427 pictures (where none of them actually were seen) or if they were placed in the present Academy exhibition of 439 numbers, which can hardly offer a counterpart to any one of them, these eleven pictures would be swamped—their force would be weakened, their impressiveness would tend to disappear, their place in one's memory



LADY IN GOLD

From the Painting by T. W. Dewing, purchased by the Brooklyn Museum from its recent Exhibition of Contemporary American Paintings.

would be fainter, and the visual impression of the exhibition as a whole would lose sharpness and focus. This amounts, in one way, to saying that a small exhibition is better than a large one, because it is easier to maintain a high standard. It also amounts to saying that any jury exhibition must inevitably include a certain number of concessions to the pictures of youth, to the pictures of inexperience, and to the pictures of belated old age.

The comparison thus inaugurated for portraits might be extended with equal force to the figure subjects, genre pieces, still-life, landscapes and miscellaneous studies. The quotations to follow are generally vindicated by the mere mention of the artist's name, as representing a very high standard. Alden Weir has two landscapes and a still-life; Gari Melchers has a church interior; Carlsen has a large religious subject; Cooper has an Indian palace gate; Dabo has a landscape and two flower pieces; Arthur B. Davies has a figure subject; Ben Foster has two landscapes; Groll has a landscape; Hassam has two interiors; Hawthorne has a figure subject; Robert Henri has two figures and a landscape; Hoeber, Kost and Guy Wiggins have landscapes; Jonas Lie has two large pictures; Metcalf has a marine; Murphy has a landscape; Redfield has one landscape and Symons has two; Albert P. Ryder has eight pictures. In this list encomiums are omitted, a reticence which it would be difficult to maintain, were it not for the press reviews which have abundantly showered praise on these pictures. Frankly speaking, the standard is impeccable.

We have here enumerated thirty-seven pictures besides the quoted portraits, and have thus reached a total number of forty-eight. The argument still holds; forty-eight first class pictures count for more in a total of one hundred and nine, than they do in a total of over four hundred, of which three hundred may be safely classed as pot-boilers, immature efforts, or (mark it well) repetitions in style and general subject of a grade slightly below the standard of the best.



WASHOE VALLEY, NEVADA

From the Painting by ALBERT L. GROLL, purchased by the Brooklyn Museum from its recent Exhibition of Contemporary American Paintings.

But the story is not half told. What is there to say of the remaining sixty-one pictures of the Brooklyn Exhibition? Mainly this, that the larger proportion of them are what may be called critics' pictures, in the sense that the public may be fairly excused for liking best the kind of pictures that it is used to, and the kind that it has seen before, whereas, it is the mission of the critic to know a good picture of a new kind, and, by firm insistence on the fact that it is a good one, to raise the public by degrees to his own standard. The time is nearly past when men like Bellows, Luks, Glackens, Beal, Lever and Kroll need to be defended. They are among the most vigorous and hopeful representatives of American art. The main merit of the Brooklyn Exhibition is that it has given a fair balance to its selection, and vindicated its catholic eclecticism, by giving nearly one-half its space to the artists of this class. Even the "Symbolists" have not been forgotten, and are well represented by Manigault. Some thirteen reviews of the exhibition have appeared in the New York and Brooklyn Press, and the assertion that pictures by the artists last named, and by others like them, may fairly be called critics' pictures is sustained by these reviews.

The following statistics may be mentioned. Seven pictures in the exhibition have taken prizes. There are forty-four pictures which have never previously been seen in Greater New York. There are eight other pictures which have never been seen in Greater New York aside from exhibition by dealers. W. H. G.

EXTRACTS FROM PRESS REVIEWS OF THE EXHIBITION

Mr. Henry McBride, in the New York Sun of April 4th.

"The best exhibition of American art of the year is now open to the public in the Museum of the Brooklyn Institute. Most of the best known artists of the country have contributed, and are well represented, irrespective of varying schools and opposing cliques. The officers of the Museum have evi-



VIEW OF CENTRAL PARK

From the Painting by CHILDE HASSAM, purchased by the Brooklyn Museum from its recent Exhibition of Contemporary American Paintings.

dently worked hard in their efforts to do something worth doing in the cause of native art, and have succeeded eminently. . . . . .

The long gallery in which these pictures are shown is excellently lighted. Moreover, the hanging committee has carefully studied the pictures, and hung them tastefully and with discretion. With the possible exception of Mr. Chase's portrait of his daughter, all the works that have been previously seen, now appear to better advantage than before. . . . . .

In consideration of the fact that good works of art have been invited, and that they have been sympathetically placed, an exhibition has resulted that adequately illustrates our achievements, and the foreign visitor who chances to pass through the city may be taken there in some confidence that he will form a just opinion of our artists. In a representative way it far eclipses the exhibition of American paintings in the Metropolitan Museum of Art. Important matter for congratulation is that works by those whom the public themselves understand, the Academicians and impressionists, are advantageously shown, and the fact that they make an harmonious ensemble is something that should also be noted."

Miss E. L. Cary, in the New York Times of April 4th.

"The selection has been made with much discretion and the hanging is in the highest degree satisfactory, a model of what exhibition arrangement should be. There are space and light for each work and the grouping is sympathetic, and well considered. The present collection at the Brooklyn Museum would be less rewarding if it contained only canvasses shown for the first time. It is a collection for correcting first impressions and discriminating their value."

Mr. Royal Cortissoz, in the New York Tribune of April 4th.

"The exhibition is one of unusual significance. It is announced as a loan exhibition of contemporary American paintings which have not been submitted to a jury. In other words, this institution would appear to have decided simply that it would make a collection according to its own judgment. There will be criticism of its lists, of course, but not in our opinion on valid grounds. While we have noted certain omissions with regret, we can see no reason for expecting that the Museum should find room for everybody on an occasion of this sort. The main thing is that it should invite a lot of interesting pictures. The principle of independence on which it has proceeded excites only the warmest appreciation."

Mr. F. W. Eddy, in the New York World of April 4th.

"Criticism of jury selections, which recurs whenever the rejected voice their grievances, and is periodically reinforced at the Academy and other exhibitions in which accepted work remains unhung for lack of space, is met in a measure by an experiment inaugurated yesterday by the Brooklyn Institute Museum



WINTER, ST. IVES

From the Painting by Hayley Lever, purchased by the Brooklyn Museum from its recent Exhibition of Contemporary American Paintings.

in the form of a loan exhibition to which artists were invited to send pictures. Friends of the Museum have expressed themselves as delighted with the display, and every painting received has a place on the walls. As all the exhibitors are favorite artists, the display is highly attractive."

Mr. James P. McCarthy, in the New York Herald (Brooklyn Edition) of April 4th.

"The list of artists represented includes the majority of the most distinguished living American painters."

From the New York Sun of April 11th.

"The general praise that has been given the Brooklyn Institute's invitation exhibition of American art will no doubt result in the decision to make such exhibitions an annual feature of the Brooklyn season. There is no reason why they should not be. They fill a long felt want. An invitation exhibition cannot stand in the relationship to young or unknown artists that the "open" exhibition does, but on the other hand it gives, when properly handled, a far more understandable exhibition to the general public.

The artist has an immense need for his experiments, and the feeble beginner who has even a spark of life that may be fanned into fire needs a chance at exhibition, but the great world is only concerned with successes, and the invitation exhibition is certainly more representative."

From a Personal Letter Written by Mr. Christian Brinton.

"The choice of pictures is admirable, and the hanging and general effects of the rooms quite exceptionally good."

Mr. Forbes Watson, in the New York Evening Post of April 3rd.

"The step is unprecedented in the history of the Museum, and it is to be hoped that there will be appreciation and support from the public sufficient to encourage the Director to make the affair an annual event."

Brooklyn Times Editorial of April 12th.

"The Brooklyn Times deems it a duty to urge its readers to attend the exhibition, and is confident that all who do so will find the canvasses well worth a visit."

Mr. John Black, in the Brooklyn Citizen of April 3rd.

"It required only a cursory inspection of the paintings to assure the reviewer that this new departure on the part of the Museum is fraught with tremendous possibilities, and Brooklyn art lovers can find cause to rejoice in the



ON THE BEACH

From the Painting by Edward H. Potthast, purchased by the Brooklyn Museum from its recent Exhibition of Contemporary American Paintings.

important step that the Museum is taking in the line of recognition of contemporary American art. Remarkable diversity of subjects marks the collection."

Mrs. Jean S. Remy, in the Standard Union of April 4th.

"There is not in the entire collection a picture shown that is not fine in feeling, and technically satisfying, and it is a satisfaction to know that the exhibition will continue long enough to give an opportunity for leisurely study and enjoyment."

Editorial in the Brooklyn Eagle of April 5th.

"By the assembling of 100 paintings in oil by American artists at the Eastern Parkway Museum, the Brooklyn Institute is paving a new road for artistic appreciation in Brooklyn. It is the first of many such exhibitions that are to be given in the Museum, and it has been so well planned that it must appeal not only to the connoisseurs of pictures but also to the general public. It has been established with such fairness, both to artists and visitors, that it cannot but meet with approbation. As to the artists invited, there cannot be just complaint that American painters are not well represented.

No one can overestimate the benefit that would come to greater Brooklyn by the regular occurrence of exhibitions of this kind. It will lead to a better appreciation of the older acquisitions in the Museum galleries that have not been so frequently and eagerly inspected as they deserve. With increasingly better means of approach to the Museum and with such exhibitions as that now on view, the Museum must take on a new lease of public interest."



THE BATHERS

From the Painting by Edward H. Potthast, purchased by the Brooklyn Museum from its recent

RECENT PURCHASES OF AMERICAN PAINTINGS.

The plans made in advance of the Exhibition of Contemporary American Paintings, and published at that time, mentioned that a fund had been raised to cover purchases for the Museum from this exhibition. The original fund was considerably augmented before the close of the exhibition, and the Committee has thus been able to purchase seven paintings, to which an eighth was added by the generosity of Mr. William A. Putnam. Aside from considering the individual merits of the pictures, the Committee endeavored also by its choice to represent the varied character of the exhibition. The list of purchases is as follows:

"Portrait" by William J. Baer; canvas, 20¾x11. This is a full length figure of a young and beautiful woman, of great poise and dignity, painted in low tones, an amplification of the artist's clever style as a miniaturist, in which specialty he has achieved great distinction.

"Lady in Gold," by T. W. Dewing; canvas, 23½x17½. A portrait painted with the characteristic reticence of this artist, harmonious in coloring and aristocratic, pensive and aesthetic in feeling—a sentiment accented by the intentional attenuation of the figure. The still-life on the table in the background balances the composition without attracting too much attention.

"Washoe Valley, Nevada," by Albert L. Groll; canvas, 39x50½. The movement of the drifting clouds gives the dominant note to this picture, which is otherwise of a vivid brightness in its contrast of color in the landscape. There is some rose color in the sides of the hills, and a suggestion of rose in the clouds, all painted in strong sunlight.

"View of Central Park," by Childe Hassam; canvas, 35½x35½. A distinguished example of the method which achieves its effects by optical vibrations, caused by the use of primary colors, reacting on one another. The result, when examined at the proper distance, is one of masterly



INTERIOR

From the Painting by BENJAMIN D. KOPMAN, in the Brooklyn Museum's recent Exhibition of Contemporary American Paintings.
Presented to the Museum by W. A. Putnam.

realism, but this result is obtained by a combination and contrast of brush strokes which appear to have no resemblance to nature when examined in close proximity. Notwithstanding, both the figure of the lady and the vase on the table are reflected on its polished surface, which serves the purpose of a mirror, with an effect of illusive reality. The artist has pointed out that the geometrical forms used by the Cubists have been anticipated in this composition, which is otherwise, of course, diametrically opposed to their point of view. Mr. Hassam was the first to show the city landscape as seen through the window of an interior.

"Winter, St. Ives," by Hayley Lever; Canvas, 40x50½. Reproduces the atmosphere of a storm-beaten English seaport town, but not lacking in effectiveness of color, mainly obtained from the vari-colored sails of the boats. The composition is highly decorative, but obviously without the sacrifice of truth or of the effect of reality. This painting won the Carnegie prize at the recent winter exhibition of the National Academy of Design.

"On the Beach," by Edward H. Potthast; canvas, 21x24, and "Bathers," by Edward H. Potthast; canvas, 12½x15½. Bathing scenes of bright colors in strong sunlight, with broad execution, and of great animation in the pose and grouping of the figures. The effect of life in the open in the summer time is achieved with simple means, and with great success.

"Interior," by Benjamin D. Kopman; board, 11¼ x 9. A domestic scene of humble character and unpretentious details, but serious in purpose and sympathetic in feeling; thoughtfully balanced and composed, and remarkably effective in its tones and contrasts of color. The brush work is of masterly technique, although Mr. Kopman belongs to the youngest generation of American painters, and first exhibited at the American Academy of Design in 1912. This is the picture above mentioned as presented by W. A. Putnam.

At the invitation of the Swedish Commissioner General at the Panama-Pacific Exposition, Mr. William Henry Fox, Director of the Brooklyn Museum, will act as a representative of Sweden on the International Art Jury of Awards.

Professor William H. Goodyear, Curator of the Department of Fine Arts, has been elected Honorary and Corresponding Member of the Royal Institute of Architects of Ireland.

At the present time the Brooklyn Museum has two expeditions in the field. Mr. Robert Cushman Murphy, Acting Curator of Natural Science and Mr. Robert H. Rockwell, Taxidermist, are in Lower California for the purpose of collecting mammals and birds. Mr. Herbert B. Judy, Museum Artist and Mr. Antonio Miranda, Modeler, are in Arizona where sketches and other material for use in museum installation are being secured.

The Print Division of the Library was formally opened on Monday, April 26th, with a reception and tea to nearly four hundred invited guests. The Rembrandt Club's gift of fifty lithographs by Whistler was shown for the first time and occupied the long gallery of the suite of four; etchings by Whistler loaned by Henry L. Quick filled a second room and lithographs of the Panama Canal by Joseph Pennell a third. The fourth room showing "How prints are made" was opened in December when the etching press for the use of the public was installed.

The hostesses were: Mrs. Ruel Ross Appleton, Mrs. John T. Arms, Mrs. William C. Beecher, Mrs. Edward C. Blum, Mrs. George W. Brush, Mrs. William H. Cary, Mrs. William H. Childs, Mrs. Walter H. Crittenden, Mrs. George W. Davison, Mrs. Camden C. Dike, Mrs. William H. Fox, Mrs. Charles Hazard, Mrs. Jennie W. Hughes, Miss Susan A. Hutchinson, Mrs. Luke Vincent Lockwood, The Misses Lucas, Mrs. Frank Lyman, Mrs. St. Clair McKelway, Mrs. John Hill Morgan, Mrs. Robert Low Pierrepont, Mrs. Frederic B. Pratt, Mrs. Vryling Putnam, Mrs. Herman B. Spelman, Mrs. Herman Stutzer and Mrs. Howard Ogden Wood.

The Print Division has received as a gift from Samuel P. Avery, a wood block and woodcut by Timothy Cole and a half-tone plate and print by H. C. Merrill, as well as 76 miscellaneous prints.

Loan exhibitions of its architectural photographs have recently been made in New Haven and in Philadelphia by the Brooklyn Museum. The exhibition in New Haven was held in the main gallery of the Yale School of Fine Arts under the auspices of Yale University, the Yale School of Fine Arts and of its departmental School of Architecture. The exhibition was opened on January 8th, when a reception was tendered by the Yale Faculty to Mr. Goodyear,

from whose negatives these photographs had been enlarged. The exhibition closed on February 7th. A subsequent exhibition of the same material was opened in Philadelphia on March 3rd, and closed on March 10th. The exhibition was held in the lecture hall of the Academy of Fine Arts, under the auspices of the Academy, of the Philadelphia Chapter of the American Institute of Architects, and of the T-Square Club of Philadelphia. A dinner was tendered to Mr. Goodyear by the architects of the Philadelphia Chapter on the evening of March 3rd. Lectures on the collection were also given by Mr. Goodyear on this evening, and on the evening of the 10th. The collection shown in Philadelphia and in New Haven consisted of about two hundred subjects, mainly those which were shown in Dublin last May, but with an important supplement of thirty-five subjects, 25 x 35 inches in size, from the Byzantine churches of Constantinople, including St. Sophia, and from English Cathedrals.

In the Department of Fine Arts the following recent accessions have been recorded: Two pieces Colonial furniture, desk and sideboard, and a portrait of Lydia Field Emmett by William M. Chase, on exhibition at the present time at the Panama-Pacific Exposition, gifts of Frederick B. Pratt; a pair of colossal Chinese Cloisonné conventional lions and twenty other pieces of Chinese Cloisonné, gifts of Samuel P. Avery; Damascus majolica tile, and the eleventh medal issued by the Circle of the Friends of the Medallion in Manhattan, gifts of Colonel Robert B. Woodward; bronze Indian head by A. A. Weinman and marble relief, "Dancing Girl" by Bela L. Pratt, gifts of George D. Pratt; pencil drawing by Jerome Myers, gift of Luke Vincent Lockwood; three pen and ink drawings by R. F. Blum, one water color by Brennan and a photograph of Robert Frederick Blum in his studio, gifts of Mrs. M. S. Myer; drawing by François Clouet, French, Sixteenth Century, representing Anne, Duc de Montmorency, gift of E. Hodgkins; forty-one oil paintings and one bronze bust, gifts of the late Charles A. Schieren; a number of bronze and plaster casts, loaned by R. Tait McKenzie; oil portrait of Jonathan Mountfort of Boston by John Singleton Copley, loaned by Miss Nancy M. Sanborn; water color by Winslow Homer, portrait of Elizabeth Goldthwaite (Mrs. John Baron), loaned by Walter H. Crittenden; portrait of Alexander Hamilton by Trumbull, loaned by Frederick W. Hinrichs; 163 pieces Coptic embroideries, purchased from the Egypt Exploration Fund; water color by Theodore Robinson and sepia drawing by R. F. Blum, purchased from the Polhemus Fund; a day bed, purchased from Henry Batterman Fund.

Simultaneously with the Exhibition of Contemporary American paintings were shown many examples of beautiful old laces. These consisted of the Besselivre collection of 170 pieces, and a selection from the d'Avaray collection, gifts of Robert B. Woodward.

Other gifts of laces were received from Mrs. Frederick P. Bellamy, Miss Margaret N. Cullen, Mrs. Charles Hathaway, Mr. A. Augustus Healy, and

Mrs. Jennie W. Hughes; and loans from Mrs. John Alexander, Mrs. William H. Bliss, Mrs. William H. Fox, Miss Jean Griggs, Mrs. Omri Ford Hibbard, Mrs. Luke Vincent Lockwood, Mrs. Frank M. Lupton, Mrs. James L. Morgan, Mrs. Frederick B. Pratt, Mrs. William A. Putnam, Mrs. Seth Thayer Stewart and Mrs. Herman Stutzer.

The Brooklyn Museum is in affiliation with the School Art League of New York City which actively promotes coöperation between the city museums and the elementary classrooms. Part of this campaign is conducted by means of a Docent, who takes classes to the museums daily and part is developed as a series of talks for children in the museum halls. The time of the Docent is divided between Manhattan and Brooklyn.

Under the direction of Dr. James P. Haney, Director of Art in the High Schools, a number of different courses have been arranged for the little folk. In discussing his method, Doctor Haney said, recently, "The great object of these talks for public school pupils is to get them used to coming to the museum—to give them, if you like, 'the museum habit'. No tickets are required and the children come unaccompanied by parent or teachers. Their behavior is admirable and from questions asked of them during the recent course, it is plain that there is a constant growth of interest on their part in the museum and its treasures."

Under the auspices of the School Art League the lectures in the spring course for elementary pupils given at the Museum were as follows: February 20, The Plum Blossom Festival, by Mr. Henry E. Fritz; March 6, A Japanese Hero Tale, by Mr. James P. Haney; March 20, Japanese Boys and Girls at Home, by Mrs. M. B. Morris; April 10, Painters of the Sea, by Mr. Morris Greenberg.

The lectures in the course arranged for the older members of the League were: February 13, A Survey of Chinese Art, by Mr. John C. Ferguson; February 27, American Painters, by Mr. Leon Dabo.

In the regular course at the Museum the following lectures have been given: March 13, Story and Romance in Tapestry, by George Leland Hunter and April 24, Attracting Birds the Year Round, by Mr. Howard H. Cleaves.

The Department of Natural Science has received from Doctor Alfred G. Mayer, Director of the Biological Laboratory of the Carnegie Institution of Washington at Dry Tortugas a sum of money to be used for the purpose of acquiring additions to the collections of Lepidoptera.

The Department of Microscopy of the Brooklyn Institute of Arts and Sciences held its twenty-eighth annual exhibition in the Dome Room of the Museum on Saturday evening, April seventh. Nearly five hundred persons attended

the exhibition which was the most interesting as well as the most instructive meeting ever held by the Department.

The Brooklyn Aquarium Society held its second annual meeting and dinner at the Hotel Imperial on Saturday evening, April seventh. The work of the past year was reviewed and plans were discussed for the annual exhibition to be held at the Museum next fall.

Among the recent accessions to the Library are the following: a set of Pool's Index to Periodical Literature; Slater's Engravings and their Value; Koehler's Etchings; Mawson's Home of the Blizzard; Osborne's Engraved Gems; Riley and Johannesen's Handbook of Medical Entomology.

THE BROOKLYN MUSEUM QUARTERLY

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an engagement —

As with you all come and breakfast tomorrow at 10.30 - or 11 if you prefer.

That would perhaps be pleasanter - so let us say tomorrow to breakfast —

Send a line -

Ever Yours
Jas. M. Whistler



96. Cheyne Walk - Friday. 31. May. 78

AUTOGRAPH LETTER WITH BUTTERFLY SIGNATURE OF JAMES ABBOTT McNEILL WHISTLER

PUBLIC LIBRARY
NOV 6 1915
MONTAGUE BRANCH

OLD LETTERS

THE AVERY COLLECTION OF ARTISTS' LETTERS IN THE BROOKLYN MUSEUM

THERE are certain words that have a charm peculiarly their own wherever they occur and Old Letters are among them. They suggest paper yellowed by age and lives mellowed by time. To the writer they are associated with an attic and rain on the roof.

These particular letters however have found a more honored resting place in the Brooklyn Museum for they are the material from which biography is made and should be preserved for all time for the delight of the student and the reference use of the author.

There are two hundred and more of them, written by artists and glimpsing the attaining of men and women whom we know only by the attainment. Sometimes a period is flashed forth by a group of letters and again a single name visualizes a school. More often the sheet reveals a life as prosaic as that of the rest of us. They cover the greater part of the nineteenth century, American and French artists being more fully represented than those of other countries.

The letters were collected by the late Samuel P. Avery of New York whose name together with that of his son, Samuel P. Avery, junior, the donor of the collection, will always be associated with the art life of their day and generation, and it is characteristic of both that these letters should have been treasured, preserved and finally deposited where they will be of the greatest pleasure and profit to the greatest number. Probably few New Yorkers whose interests touched so many sides of art have done more for their city than the elder Mr. Avery and these letters would indicate that he had very happy and often personal relations with the artists themselves, recalling Charles Lamb's regard for

The illustrations are from the Brooklyn Museum's collection of artists' photographs, the gift of Mr. Samuel P. Avery, jr.

his publisher, Whistler's friendship for his biographers, and other cases of felicitous business and artistic relations. Sometime since, Mr. Samuel P. Avery junior divided the collection, presenting one part to the Metropolitan Museum of Art and the other to the Brooklyn Museum.

The letters fall into natural groups. The American artists represented suggest a distinct period in the history of the Fine Arts in the United States.

The colonial period is not represented except by references as to the whereabouts of paintings of that time, but there are letters from the early nineteenth century men influenced by the English school, from artists who studied at Rome, Düsseldorf, Munich, and Paris according to which was the art center of their day and lastly from artists who may well lay claim to belong to a later independent American school.

Among the men of the early nineteenth century appears Trumbull, of distinguished ancestry, the text-book reproductions of whose paintings of revolutionary history are known to every child. Well might he have painted those scenes for he was part of them. Most of his works may be seen in the important collection of early American paintings in the Art Gallery of Yale University. He wrote

New York, 22nd January, 1824.

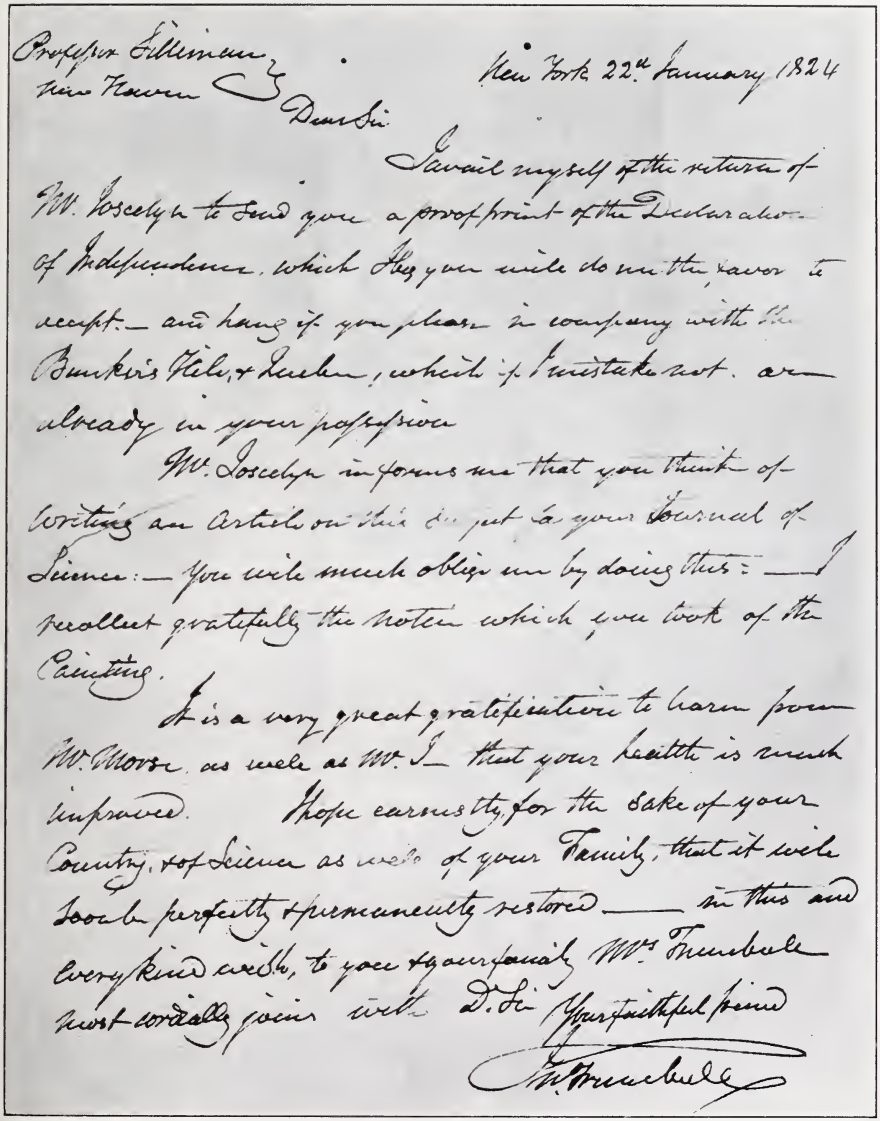
Professor Silliman
New Haven

Dear Sir

I avail myself of the return of Mr. Joscelyn to send you a proof print of the Declaration of Independence, which I beg you will do me the favor to accept,—and hang if you please in company with the Bunker's Hill, and Quebec, which, if I mistake not, are already in your possession.

Mr. Joscelyn informs me that you think of writing an article on this subject for your Journal of Science:—You will much oblige me by doing this:—I recollect gratefully the notice which you took of the Painting.

It is a very great gratification to learn from Mr. Morse, as well as Mr. J—that your health is much improved. I



Professor Silliman
New Haven

New York 22d January 1824

Dear Sir

I avail myself of the return of W. Joscelyn to send you a proof print of the Declaration of Independence, which I beg you will do me the favor to accept — and hang if you please in company with the Bunker's Hill, & Lexington, which if I mistake not, are already in your possession

W. Joscelyn informs me that you think of writing an Article on this for your Journal of Science: — You will much oblige me by doing this: — I recollect gratefully the notice which you took of the Painting.

It is a very great gratification to learn from W. Morse, as well as W. J — that your health is much improved. I hope earnestly, for the sake of your Country, of Science as well as of your Family, that it will soon be perfectly & permanently restored — in this and every kind wish, to you & your family Mrs Trumbull most cordially joins with Dr Sir Your faithful friend

J. Trumbull

LETTER TO PROF. SILLIMAN FROM JOHN TRUMBULL
From the Avery Collection of Artists' Letters in the Brooklyn Museum.

hope earnestly, for the sake of your Country, and of Science as well as of your Family, that it will soon be perfectly and permanently restored—in this and every kind wish, to you and your family, Mrs. Trumbull most cordially joins with, D. Sir,

Your faithful friend,
JOHN TRUMBULL

Later came Thomas Sully, the most fashionable portrait painter of his day, whose artistic life is part of the history of the Philadelphia Academy, in which city there are many of his canvases of the belles and beaux, stately matrons and prominent men of the first half of the century.

Although born in England in 1783 and much influenced by Thomas Lawrence, Sully spent most of his time in this country, where he lived to a ripe old age. He exhibited 'The Poetess' at the twenty-seventh Exhibition of the National Academy of Design in New York in 1852 for he sent it from Philadelphia via Adams Express, valued at $100.00, according to this paper.

Among the letters of portrait painters of the thirties and forties and later are:

One from C. L. Elliott, the leader of the old portrait school of 1840, whose very fine portrait of General Fremont is in our own gallery. He was a pupil of Sully as well as of an artist named Quidor.

One from Daniel Huntington, the third president of the National Academy, whose portrait of Bryant is in the Brooklyn Museum, who wrote Mr. Avery in 1862, 'I think it will be a good plan to preserve a portfolio of photographs of my pictures having the negatives destroyed after two or three impressions.' Would that all artists would do likewise for the benefit of reference librarians! It may not be generally known that the original of the much engraved 'Lady Washington's Reception,' by Huntington, hangs on the walls of the Hamilton Club in Brooklyn.

And another from George P. A. Healy whom Sully advised to become a painter, who wrote Mr. Avery in 1868

from Chicago, 'Before leaving for Europe to remain several years, I purpose selling my pictures by private sale or at auction, as may in your judgment best serve my interests. They are,' etc. Thirty-three pictures with prices asked are enumerated. As his output was large, this list is insignificant numerically but may be of assistance to a biographer of the future.

A letter from William S. Mount, the best genre painter of his day, has a local interest for he was born a Long Island farmer boy in 1806 and, though he began his artistic career in the city, he derived his inspiration from the country to which he returned to paint the scenes from rural life by which he became famous. He had built a wheeled studio with a glass front drawn by a pair of horses, in which he traveled from place to place on the Island. One of his pictures is in our own gallery. He wrote

Port Jefferson,
Feb. 18th, 1862.

Samuel P. Avery, Esq.

My dear friend. Your very interesting note was missent. . . . Artists, pictures and nature are interesting to you and to all men having souls. I should like to have been with you at the reception at Dodworth's.

As regards your Baltimore friend, Mr. Jenkins, I will try and make him a sketch in oil, seldom paint in water color. If ever I get to painting pictures again it will be through the earnest solicitations of yourself, Mr. Falconer, the Woods and others.

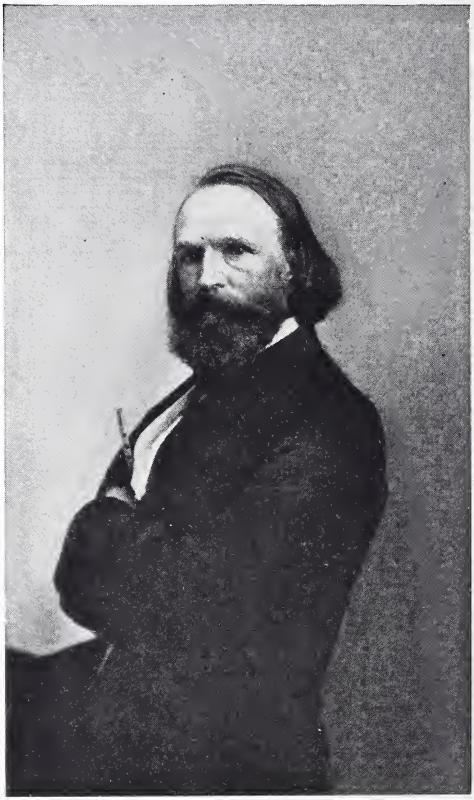
My Portable Studio has been visited by a large number of people to see a portrait I have just finished of Mr. E. T. Darling—Boat & Yacht builder.—It is considered by his friends a great success. . . .

We have been firing the *Big Gun*—this afternoon. The war news does my heart good. Please give my regards to Mrs. Avery.

Yours very truly—
Wm. S. Mount.

Could the Mr. Falconer have been J. M. Falconer, the Brooklyn artist?

It is curious that among the many letters written in the sixties so comparatively few refer to the Civil War. One of the most interesting is from the son of J. R. Lambdin, the artist who established in Pittsburgh in the twenties the first public exhibition of works of art in the West.



WILLIAM S. MOUNT, N. A.
1807-1868
From the photograph in the Brooklyn Museum's Collection, the gift of Samuel P. Avery, junior.

Camp near
Racoon Ford, Va.
September 26th, 1863.
My dear Mr. Avery

Let me "so late in the day" thank you for the Tennyson, the Photographs and your kind letter. . . Your letter reached 3rd Division Hd-Qts after I had left there, having been ordered to the 1st Div. 1st A. C. as mustering officer. There I thought I had arrived at my place; it was in every respect all I could desire, but my joy was of short life as the Corps Commander yielding to the entreaties of my Colonel, returned me to duty in my Regiment to the Command of my Company, of five men. And thus once more I find myself on foot and busied with all the troubles and petty annoyances of the company officer and after the delightful freedom of my Staff duties I do not in the least enjoy them. May be you, at home can tell what the Army of the Potomac is about, but we in the field are lost in a maze of wonderment.

After getting 8 days rations packed away in Haversacks and knapsacks the 1st Army Corps moved and we all expected a battle to be imminent. But no! After a half day's march we reach this place 2 miles from the Rapidan River and find that we came here only to let the 12th Corps go back. To reinforce Rosecrans some say, others hold to a point lower down the river and none know while all wonder why we do not advance. But I am one of the very few who enjoy soldiering and I am willing to take what comes, on foot hoping again to be mounted, on Staff duty hoping to be retained, and each day finds me the more thoroughly used to the life and the further cut off from the world of literature and of art. I think the Tennyson you sent me rescued me from a condition hopelessly unpoetical and made me once more imagine that there was yet a link existing between my present and my past self. I know how thoroughly your time is occupied but yet if you can occasionally find leisure to write me a line or two about Art and Artists in New York or about anything I shall deem it a very great favor and in return will give you what I can in the way of my experiences.

Again accept my sincere thanks for your past favors and believe me

Ever Yours
Respectfully
Harrison Lambdin
121st Regt. P. V.
3rd Div. 1st A. C.

S. P. Avery Esq.
102 Nassau St.
N. Y.

One feels grateful to Mr. Avery for sending him the Tennyson, lest too much of the soldiering which he confessed he enjoyed, might have turned him from art.

There is another reference to the war in the letter of one Mr. Greene, which also contains some Academy talk of the day. Happy the exhibitor of the sixties whose fame has survived the half century!

LeRoy, N. Y.
Apl. 30, 1862

Friend Avery

I have been expecting a note from you for some time past, but thought it likely that you were waiting for the exhibition

to open. I take the Tribune and see The Independent regularly; from the notices in those papers and the Catalogue, I judge that your *full length* portraits will be the *sensation* pictures, *Page* leading off!! Gray's picture I should like much to see. Of course the *whole* exhibition as well, but I am afraid I shall be doomed to disappointment as I was last year. Otto Sommer seems to be a new name,—"Strong?" E. W. Hall—who is he? I see that Hays exhibits again and Hall! (G. H.) He has no figure pieces I think. Oh, yes! The Cart of Seville. I noticed however a number of print pieces catalogued. Nothing by Oertel.—How does Inness compare with last year? . . . I have done scarcely anything myself in the painting line for the past two weeks, having been interrupted by *domestic* arrangements. . .

Is Boughton in Paris or London?

Our *war news* comes on apace, and the monster has his jaws well nigh broken. I suppose there is little doubt that New Orleans is taken, at the same time—particulars from *our* side would be "gratefully received."

In a hurry

Yours truly,

E. D. E. Greene.



E. D. E. GREENE, N. A.
1823-1879
From the photograph in the Brooklyn Museum's Collection, the gift of Samuel P. Avery, junior.

The George H. Hall referred to in Mr. Greene's letter is represented by a letter to Mr. Avery in 1859 about a fruit piece he had promised to paint.

The early part of the last half of the century saw students flocking to Düsseldorf and Munich.

W. H. Furness, jr., another Philadelphian, brother of Horace Howard Furness, the Shakespearian scholar, went to Düsseldorf. He died comparatively young but a few years before his death he wrote

Studio Building, Boston,
Dec. 21st, '64.

S. P. Avery Esq.

My dear Mr. Avery,

I felt anxious when you did not answer my letter only lest my last might have miscarried. I had a small jubilee all alone when I saw Kensett's name at the bottom of the check. Of course it made it doubly valuable to me and I have some idea of framing it (as one of Kensett's productions *not* well *drawn*,) and hanging it up in my dressing room to renew daily the encouragement which it gave me this morning.—Shame and confusion of face be mine that you have not received the Souvenir of Palma before this, but it has waited for a suitable model and the prospect at present is that it will be finished by the middle of next month. . . You must know however that I keep it as a sort of *bon bouche* for I intend that it shall be painted from nature. . .



GEORGE H. HALL, N. A.
1825-1913
From the photograph in the Brooklyn Museum's Collection, the gift of Samuel P. Avery, junior.

In my studio at present I am suffering from great lack of life and a violent photographic attack. I am up to my eyes in copying photos. Fortunately they are all as good subjects as photos can be. I am in need of a good model whom I can make stand for dresses but I have some prospect at present of one. I have plenty of Lady friends who would

"be delighted to sit for me" if I would only let them know but I am worried lest I shall tire a person whom I hire and much more so when my sitter is doing me a favor. . .

Gratefully yours

W. H. Furness Jr.

Are all artists as kindly and considerate?

One of the early Munich men was Oertel, born on the other side in 1823, who lived in this country after he was twenty-five, where he became known as an animal painter. Of a strongly religious nature, he also painted religious subjects. This characteristic is shown in the following letter:

Westerly, R. I., Jan. 24, 1862

My dear friend

My dearth of art news received a little grateful sprinkling by your unexpected letter, and but for such an occasional chance shower it would be a very *Saharah* for barrenness and dryness, here in this well-to-do nest of manufacturing, New England interests. If there were no habitation within ten miles of me, I could not stand much more isolated, professionally, than I am in this very Westerly. Yet I am not sorry for it, in some sense. Were I a young aspirant, it might be hurtful; but I have worked and studied for a quarter of a century, and now desire nothing more than quiet, in order to produce, without disturbance, some of the thoughts that have been leaping up within and around me, these many years. Some, indeed, may doubt the utility of such seclusion,—but I have had *my* contact with the world, and am thinking it is worth while, to sacrifice some social pleasures, (which I certainly do) to that condition of mind, which by inversion and careful digestion, is best enabled to grasp truth, and to embody it vigorously and understandingly. For what is all picture-painting without some earnest, undying thought at the bottom of it! And you, my friend, well understand, that the tendency of general society is, to drive such thought out of the brains of an individual.—Now you see, this splendid room of mine is my Patmos to which I am banished, and where I hope and pray for some revelation. Whether, in it, I paint worse or better, you will soon have an opportunity of judging, for if M.

Schaus does not disappoint me with the frame, I mean to have the "*Father Time and his Family*" done in about five weeks, when its owner proposes to exhibit it somewhere in the City, to make it known. And if faithful, hard work of some *six months* has not all been in vain, I shall show you a better picture coming from this solitude, than I ever could have shown you in New York. . . In a short time from this I expect to withdraw the few pictures of mine, now at Snedecors from the market, and hope to be able, never to offer for sale any but thoroughly matured works of intrinsic value and few of these. My wants and expenses are small, my resolution stout, and my aspirations high,—not for fame,—I care not for it,—but for excellency. . .



JOHANNES A. OERTEL, N. A.
1823-1909
From the photograph in the Brooklyn Museum's Collection, the gift of Samuel P. Avery, junior.

Jan. 25.

As to these *Horse-pictures*, I would answer that, so far as I am concerned, they shall remain with those for whom I paint them, and not make their appearance in Galleries and exhibition-rooms. They are, emphatically, my *living*. What is, in future, to represent *me*, the deep under-current of all my heart and life, is a separate thing, and will come to light now and then, as God grants me opportunity. But to keep a *friend* posted on my various doings,—you may, either at Mr. Mengers, in Dey St. or at Delmonico's, see a portrait of King "George M. Patchen" which I finished to-day, and shall send to its destination on Monday. . .

Art has to be written into ones deepest soul by the fiery finger of God, to burn with undimmed brightness amid the damp fogs of a materialistic community. Yet I fear not,—

and also the true sympathy of some friends, though distant, is a strong support. Let us have confidence to the *heart* of humanity, under all its stiff crust of selfishness and ignorance, and appeal to that,—we will, after all, find, that man was created into the image of his God!—

Your news of G. Baker has delighted me.

And now, forgive this long and selfish letter of a friend who has few here to talk to, and believe me, with many regards to Mrs. Avery, and yourself,

Yours very sincerely

Johannes A. Oertel.

There is a three page business letter from F. O. C. Darley, the illustrator, written from Cambridge, Mass., in 1866. And another from John W. Ehninger from Buttermilk Falls, N. Y., on Oct. 22, 1859, in which he says: 'So Darley I suppose was married on Thursday last. One more veteran gone!' A vivid glimpse of artist life redolent of masculine camaraderie! It recalls the consternation that fell upon the little group of artists at Chevillon's inn at Grez, in the forest of Fontainebleau, of which Robert Louis Stevenson was a member, when their masculine seclusion and freedom were threatened by the appearance upon the scene of Mrs. Osbourne (afterward Mrs. Stevenson) and her young daughter, a consternation that soon proved unwarranted.

Of the Hudson River School of painters there are letters from F. E. Church, and Bierstadt who studied at Dusseldorf and was very popular in America in his time. Also one from Worthington Whittredge of the same school, whose bright example robs age of some of its terrors for he died a few years since, a link with the past, at ninety, painting and painting well to the end. He wrote Mr. Avery a long letter in reply to the latter's inquiry 'What American artists received awards at the Centennial Exhibition?' Others of the early landscape painters are George D. Smillie and Samuel Colman. The latter is undoubtedly the one to

whom William Hart, the American animal and landscape painter, referred below.

Conway

August 7th 1855.

My dear Avery

The night after I wrote you I went up and saw Friend Colman. He is doing the thing of all others that I dislike viz. doctoring up his sketches in the house. The consequence of it will be that they will be neither one thing nor another, sketch nor study, very like himself. He has always done the same thing I understand.—There is a great deal of fine feeling in them and some real fine subject matter in three or four bits but you do not feel as though they were parts from which pictures are to be produced. I wish you were here to see them that I might know if I am right or not for I would be glad to be mistaken.—My large one creeps on slowly but surely. Wife and little ones are here and all well—Mrs. Hart joins with me in sending regards to Mrs. Avery and yourself

And believe me to be yours most sincerely

Wm. Hart

American art in the last half of the century was influenced more by France than by any other country. George C. Lambdin, another son of J. R. Lambdin, whose professional life was spent in Philadelphia, although he had studied at Munich and Paris, recognized this. By the by, Philadelphia seems to have been very prolific in artists in the nineteenth century.

April 6th—62.

My dear Mr. Avery:—

As to my picture. . . I would rather not say anything about its being a study. I hate apologies; prefer to let every tub stand on its own bottom. I dare say it does look spotty but please remember that we are all so used to looking at little French pictures in wh. everything is subordinate to the general effect and to landscapes where all is in diffused light that any approach to the truth of an

indoor effect on a number of figures *must* seem either spotty like the present or ineffective as the former.

My great desire at present is to *accumulate* cash to keep me this summer while I devote myself to painting directly from life. I think I could do *single* figures in as *masterly* a manner as the "old man" if I had models just to suit. If you like the old head enough to care to keep it I *wish you would*. . .

We have had a gardener pruning for a couple of days, a most picturesque man with a long beard & a *crimson* jacket bound with green (very much faded of course). I have got two sketches of him wh are *really* grand. As soon as I get through with Jenkins picture and a little one I am doing for an exh. I shall try him. I have also a sketch of my father in a long red dressing gown & pipe looking at his plants on a bright Sunday morning. . . I shall not do any more just now.

Ever very truly yours
GEO. C. LAMBDIN.

W. P. W. Dana, born in Boston, now living in London, was another American disciple of the French school. His letter to Mr. Avery in 1869 is of local interest on account of the Copleys in the Brooklyn Museum and of general interest because of the present activity of most American museums in acquiring such canvases.

Brandywine Summit,
Penn[a],
July 8th, 1869.

I wish I could aid you in your search for Stuarts, Copleys, &c. I have heard that such things existed there, but when I have been there have never seen others than those contained in the Athenaeum, which has the largest number of Allston's pictures and sketches. I looked when in Boston, some three or four years ago, for one of Constable's best pictures wh. I heard was there but did not succeed in finding it. At the Athenaeum you will see the original *original* heads of Wash[n] and Mrs. Wash[n] by Stuart—A fine head of West by Allston—one other of Copley's, but of Newtons I know of none anywhere unless Mrs. Oakly (his daughter) in New York may have some . . . Think of Eastman J's being caught at last!

Evidently John La Farge also was asked for information as to the resources of Boston. This letter to Mr. Avery must have been written while La Farge was working at Newport under the influence of William Morris Hunt:

Newport, July 10./69

My dear Mr. Avery,

I have looked through my note book for the memoranda of pictures to be seen in Boston, but cannot find it, and will have to supply by memory as far as I can. This is not much. I can only remember a few Allstons, but those you should see if you possibly can. There are a couple owned by the Elliotts which are lovely—one a landscape another a female head and then the Lorenzo and Jessica owned by the Jacksons—Both the families have moved from their former residences.

The enclosed letter however to Mr. Wm. R. Ware, the architect, nephew I believe of the Ware who is the authority on Allston, would enable you to see them easily. . .

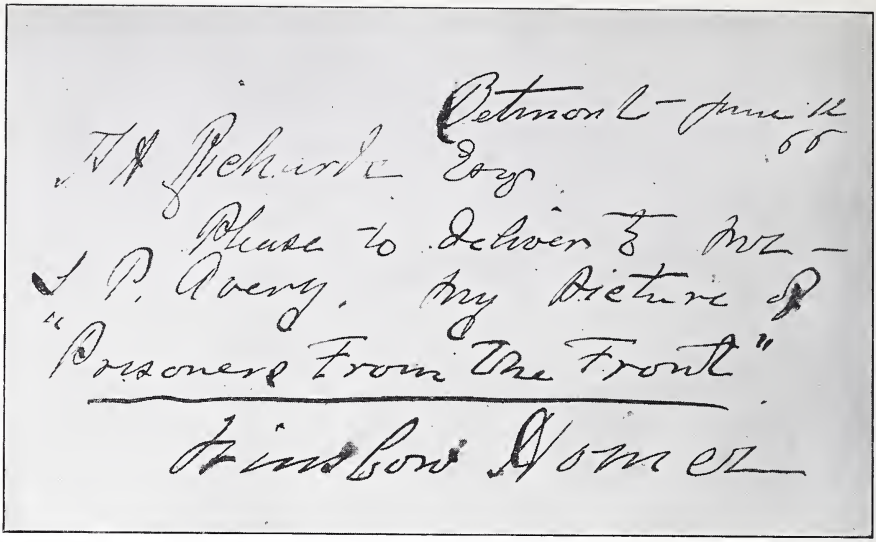
Perhaps the Lorenzo and Jessica may be at the Athenaeum this year. I heard that it was to be sent there. Another Allston, "The Valentine" I saw at Mr. Ticknor's—it is less valuable—Where one or two others are which I saw and admired I cannot remember and have no means of getting at the remembrance.

As to Copley's I am not well informed. I have seen some, but do not remember them well; I shall enclose a letter to Mr. Wendell Holmes, son of Dr. O. Wendell Holmes, who is interested in art and may put you on the track.

I regret very much that I have the mischance of being away from Boston and even from the town of Newport, so that I cannot get at any one who can tell me where to send you.

I remain, Dear Sir
Very truly yours
John La Farge

P. S. . . . Mr. Ware is professor of architecture at the School of Technology, interested and knowing in art and a most pleasant and capable man—If you have time get him to show you his *museum* at the Technological Institute and hear about it. It is about the most serious thing in art we have.

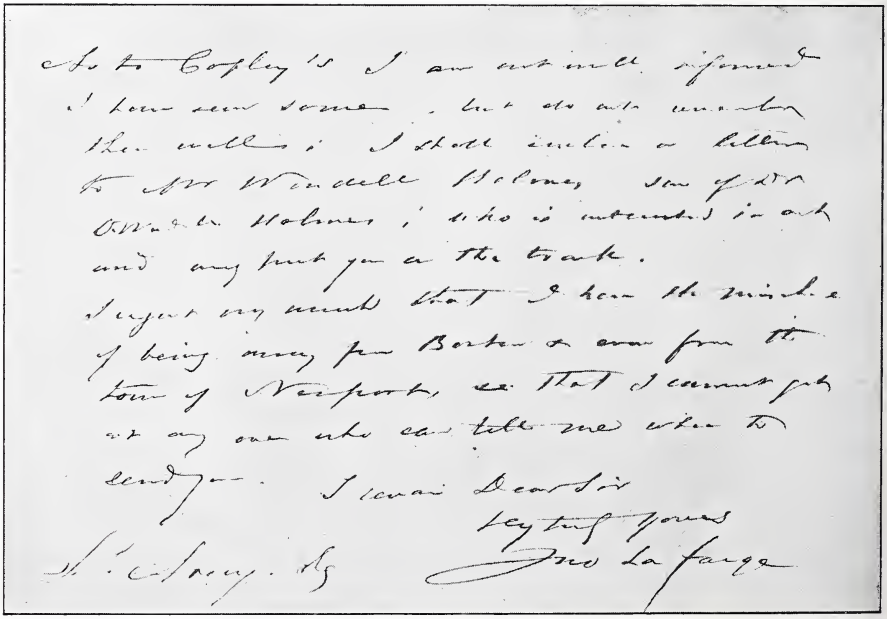

Petmonk June 11 66

T. H. Richards Esqr

Please to deliver to Mr. J. P. Avery. My Picture of "Prisoners From The Front"

Winslow Homer

ORDER FOR PICTURE SIGNED BY WINSLOW HOMER
From the Avery Collection of Artists' Letters in the Brooklyn Museum.


As to Copley's I am not well informed I have seen some, but do not remember the subjects. I shall invite a letter to Mr Wendell Holmes son of Dr Oliver Holmes, who is interested in art and may put you on the track.

I regret my inability that I have the misfortune of being away from Boston & even from the town of Newport, so that I cannot get at any one who can tell me where to send you. I am Dear Sir

Very truly yours

John La Farge

H. C. Avery. Esq

LETTER TO MR. AVERY FROM JOHN LA FARGE
From the Avery Collection of Artists' Letters in the Brooklyn Museum.

During the period from 1830 or '40 to 1870, Rome was the destination of many American art students, especially sculptors, and among the painters attracted to Italy was Elihu Vedder for whom the lure was so great that he has spent the greater part of his life there. He wrote

New York, July 14th, 69.

Dear Mr. Avery:

I called twice to see you but you were out both times. I hope this note will do as well. I have been so hurried—among other things getting married—that I could not attend to sending around a picture I have left which I wish you would see to. It is the "Abel." I don't know how salable it may be but perhaps by making the price moderate you could dispose of it, if not to my advantage at least to yours. I think it ought to be limited at $—the lowest figure—all above that so much the better. I have done very well considering I have no actual need of selling it but being too large to take back with me it would be better to let it go. Could you not exhibit it in the fall exhibition. . . My address will be Care of Magnay [?], Pakenham & Hooker, Rome, Italy. . .

Yours truly,

Elihu Vedder.

The 'Abel' was evidently sold, for in the delightful 'Digressions of V.' which he published in 1910 he mentions in the chronological list of his works:

'1869. By the way, from Boston I must have extended my travels for I find I was married to Caroline Beach Rosecrans, July 13, at Glens Falls, N. Y. Also, as these are accounts, I find we received moneys from our respective fathers. I remember mine wanted to give much silverware, perhaps thinking thus to keep it in the family, but I advised cash, which was accordingly substituted. Poor father—little did he know! Keep money in this family!—much. . .

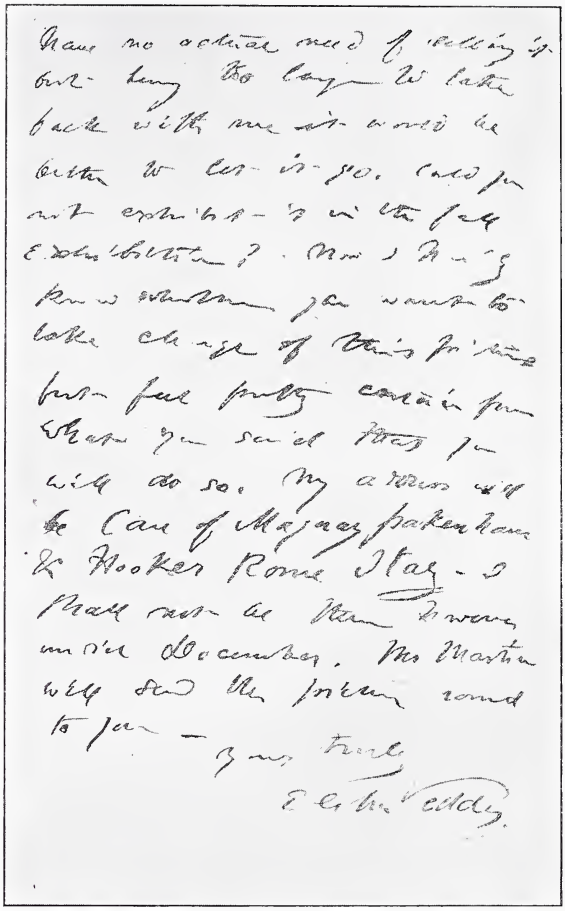
Sales in Boston resumed,—by Doll, understood.

To G. W. Long:

Head of Abel.

(You will see how G. W. and others stuck by me.)'

The Avery letter must have been written the day after his marriage. Mr. Vedder is not the first man who has deemed it wise to look well to his finances after taking such a step.



LETTER TO MR. AVERY FROM ELIHU VEDDER
From the Avery Collection of Artists' Letters in the Brooklyn Museum.

F. H. Hotchkiss was another American student in Italy of whom Vedder says

'He became my dearest and best-beloved friend. . . I first met Hotchkiss in Florence. He was a very tall, spare, delicate looking man, who had evidently suffered in his youth, for he had worked in a brickyard under a hard relative who was strongly opposed to his artistic tendencies, and had evidently there laid up the germs of that malady which was ultimately to be the cause of his death. For he died young, and now lies in his neglected grave in the land which he loved so passionately and painted so lovingly.'

He wrote

Rome
Nov. /62

Dear Avery

I have not heard from you for so long that if it were not for the papers I get occasionally I should think you had forgotten me. . .

When I wrote you last I asked you not to send me any papers for political or war news. I see more than I get time to read at the bankers and as each paper costs me from 15 to 18 cents you will see the propriety of my mentioning this. I value your friendship too much not to feel pleasure in receiving anything from you but I must forego even this while in my present circumstances.

In the art world of Rome the prospects look very gloomy for the coming winter; with the present rate of exchange very few will leave home and of these none are likely to buy pictures. I have sold two or three studies this fall to C. . . P. . . of Boston for small prices but enough to enable me to live and hope for something better by and by. Mr. P. . . also bought of me two proofs from the Liber Studiorum which were given to me in exchange for a sketch from Turner by a gentleman in London. I only got 25 scudi for them, either of which was worth more than that sum. Have you seen or heard anything of some pictures exhibited at Goupils' by an artist named Tilton who was in America last summer? . . .

May 27th

You sent me not long ago a *part* of a pamphlet containing certain "articles of organization" of a Pre Raphaelite character but the last part which should contain the names of those who subscribe to the articles was not there. Was it lost by some accident or didn't you send it? I should like to know who they are—

I have had much better success this winter in selling pictures than I expected. I shall be able to get through until next winter very comfortably. . . I don't know what to say about coming home. . . A. . . D. . . tells me that you advise my doing so immediately and if it were not for getting material for two or three pictures I have in contemplation I should think very strongly of it, but if I start now I should have no means when I got to N York to keep me until I could earn something which would not be

before 5 or 6 months and if I stay here next winter I think I can do better than this past season especially if I paint some pictures as I intend to do directly to suit the taste of the patrons of art in this artistic city.

You would be surprised to see the things the Americans buy here and also the kind of things the Americans paint and put into marble for our intelligent countrymen. I think now of staying here next winter and painting as much as I can and coming home next spring or early in the summer I hope by that time to have something to bring home with me. I have sold most of the studies I have made from nature since I have been here but I hope to do something this summer . . .

Give my love to all our friends and write to me soon, to care of W. J. Stillman, United States Consul and

believe me as ever your friend

F. H. Hotchkiss

Does the 'part of a pamphlet containing "certain articles of organization" of a Pre-Raphaelite character' refer to 'The Germ,' that short lived publication of The Brotherhood in England?

The art verdict of the present justifies Hotchkiss's opinion of the things the Americans bought there and also the kind of things the Americans in Italy painted and put into marble for their intelligent countrymen in the early sixties.

There are notes from George M. Boughton and Winslow Homer, not to mention many others. And here is a note from Whistler which is also signed with the magic butterfly:

Dear Mr. Avery:—Your note just reached me so that Friday and Saturday make a short notice of it if you mean today and tomorrow.

I should be greatly disappointed if Inness were to leave town without coming to see me after so many years—and I need not say how pleased I shall be to see you all—Come this afternoon at three o'clock if you can—At five I have an engagement—

Or will you all come and breakfast tomorrow at 10.30—or 10 if you prefer.

That would perhaps be pleasanter—so let us say tomorrow to breakfast—

Send a line—

Ever Yours

J. A. McN. Whistler

96. Cheyne Walk– Friday 31.—May. [78]

Of course Mr. Avery went to breakfast. Fancy anybody's taking second thought when given the choice of late afternoon or breakfast time on Cheyne Walk! Weren't they always breakfasting on Cheyne Walk those dwellers in old Chelsea, Rossetti, Swinburne, Meredith, and the rest of them, and would not one willingly have given his right hand to be bidden? There is something peculiarly intimate at the thought of breakfast in that artistic and literary atmosphere. One can fairly smell the coffee and hear the babble and stand apart with narrowed eye to see the latest work of the brush and woe betide the man who had anything but praise for Whistler's brush!

It will be remembered that Whistler was at West Point from 1851-1854 where he stood at the head of his class in drawing which cannot be said of his class in chemistry. While there, his instructor in drawing was Robert W. Weir, a well known figure painter of his time, the names of whose two sons, John F. and J. Alden, also his pupils, stand high in the annals of later American painting.

The elder Weir sent the following poem to Charles J. Morse of Cambridge-Port, Mass:

West Point July 27—1853

My dear Sir,

I send to you a few lines written some time ago on an old clock that stands in my painting room,—so old that it has ceased to go, and with all the coaxing and urging that I can give it, continues to stand still.

TO MY OLD CLOCK.

My ancient clock no longer ticks,
Or taketh note of time:
Its hands are still, its voice is mute,
That voice that once so resolute
Sent forth its hourly chime;
And stillness now is felt to be
Like distant surges of the sea.

My ancient monitor of worth!
Thy silence makes me sad;
That measured beat no more I hear,
But pulses beating in the air,
And weariness run mad:
The skeleton of time, *sans* breath—
The prelude, as it were, to death.

Come, ancient friend! no longer thus
In moody silence stand;
Cheer up! and let your wheels go round,
And gladden with your silver sound
Once more our little band;
Speak to our hearts, and to us say,
Thus, thus life's moments pass away.

Yours very truly

Robt. W. Weir.

The peace and quiet of that 'painting room' where the old clock ticked the hours away, gladdening with its 'silver sound' that 'little band' seem very real. Who were the members of the 'little band?' Were they all his pupils, like Whistler? Perchance some reader of this poem will say.

A letter that has a very modern sound and brings the Avery collection quite up to date, is from W. J. Hennessy, who, though born in Ireland, has spent many years of his life in this country. We trust that he will pardon the publication of the following extracts which are given not only for their agreeable flavor but because they represent an interesting opinion of a phase of modern art.

June 7th, 1903
Ifield Park,
Crawley, Sussex.

My dear old time Friend—

Your very welcome and most friendly letter has come to hand this morning, and it has given me rare pleasure. I had not forgotten old times nor old time friends. . .

The rage for old masters still occupies the minds of those buyers who have money to spend on art, and the contemporary painters must wait till this craze will end. These alternate changes in "fashion" for old masters, and contemporary work, have come and gone regularly about every 15 years since 1870, and to this cause I attribute the demoralizing efforts on the part of many contemporary artists to invent new fads and indulge in the most crazy and crude attempts to force the attention to their works in the exhibitions. In looking at some of the fearful abortions by men of undoubted artistic gifts, one is inclined to doubt the painter's sanity or honesty—"Has he gone mad, or is he a humbug striving only for *réclame*?" is the natural question arising in one's mind at sight of these wild . . . canvases. I am in sympathy with all the best in old art, and all the sincere and convincing movements in modern art appeal to me, but I find that the great men of the past while developing and expressing their own individuality have always kept in touch with tradition. They have not kicked over the traces and gone mad. It has been the same with the best men of the 19th century—none of them has lost his hold on great traditions. For myself—I have modestly and serenely studied the natural effects in Landscape, and the form and character expressed in the human figure, and have never allowed myself to be affected by any of the wild and temporary plagues which have been inflicted on the public within the past 15 years. . . All the same I have always desired to be well represented in the annual Exhibition of my dear old *Alma Mater*, the National Academy, N. Y. and hope to do so as soon as circumstances have been made more favorable and more convenient by our Government by repeal of the duty on pictures, which at present makes it necessary for an American artist living in Europe, no matter how inconvenient it may be for him, to attend *in person* at the American consulate nearest to him,

to make a sworn declaration that he is an American Citizen, and that he has painted the pictures etc., etc. This is a great inconvenience at times when one is 40 or 50 miles or even more away from a consulate, and has often prevented me sending pictures home. . .

Sincerely your friend

W. J. Hennessy.

P. S. The Benson you inquired about is not our old time friend Eugene but the son of an English Bishop.

Happily the American artist no longer has cause to criticise the duty on art.

S. A. H.

(*To be continued.*)

THE DEER GROUP

DR. FREDERIC A. LUCAS has called the pronghorn antelope the most characteristic of North American mammals, and the beaver in some ways the most important. The distinction of the former animal lies in the fact that it is the sole representative of an exclusively American family of ungulates. In the case of the beaver, the inference to be drawn is doubtless that the quest of its valued fur has been to a great degree responsible for the opening up of the interior of the continent by *voyageur* and pioneer; and in this sense the remarkable rodent has been truly a maker of history. To complete a trio of mammalian eminence, the Virginia or white-tailed deer might fairly be placed with the pronghorn and the beaver, for it may be held without fear of contradiction that among all our larger species the deer is the most generally distributed, the most abundant, and the most enduring.

To write of the common deer is difficult, its life history, like that of the lion, being so well known that the greater part of what one might say would seem trite. Found wherever there is a considerable remnant of woodland cover, breeding and ranging in some part of almost every state of the Union, adapting itself to the ever widening encroachment of human habitation, it is the most familiar of large mammals. Like the bob-white, it has persisted in spite of the hunters' toll, and has repleted its numbers with surprising rapidity. Instead of being exterminated by civilization, it has been in a measure absorbed within the area of civilization, and wherever rigidly protected it has become as much a part of country estates and rural golf links as of government reservations and primeval forests. After long years of persecution, even to the point of local extinction, it has come to be appreciated; the destruction of its ancestral enemies, such as wolves and panthers, has been well-nigh



THE DEER GROUP

completed, and today it has fewer foes to harry it than almost any other game animal.

On Long Island, as in southern New England, the native deer were at one time nearly or quite exterminated. With the advent of long closed seasons, however, they have increased and spread out into the once depopulated regions. The numbers have been further augmented by the introduction of animals from protected herds. The deer of Long Island are now more than holding their own, and although their range is rather restricted, they are sufficiently numerous in the central part of the island to be somewhat of a nuisance to farmers. Yet many bucks are annually killed during the few days of the open season.



During the rutting season, which occurs in November, the adult male deer become so aggressive that they will often attack a man. Their necks become much enlarged, and they rush about wildly, engaging in battle any rival that they may chance to meet. During such encounters, the antlers of two bucks sometimes become interlocked so that they cannot be disentangled. Death by starvation is the result of such an accident, unless one of the four antlers is broken off by the days or weeks of continual stress.

According to government reports, upwards of sixty thousand white-tailed deer are shot each autumn in the states east of the Mississippi. The popularity of deer hunting is consequently an important source of revenue to many communities. It has even been suggested that with proper breeding and regulation of state or privately-owned herds, venison, the most easily digested



Virginia deer, from a painting by Audubon, given to the Museum by Mr. Abram Baylis.



Fighting bucks with interlocked antlers, from a model by R. H. Rockwell, exhibited in bronze in connection with the deer group.

of meats, might in the distant future become a universal food.

The habitat group of white-tailed deer recently placed on exhibition on the natural history floor of the Museum is perhaps the most elaborate example of its kind in the United States. The exhibit is a 'one-view' installation, of the type used for several of the bird groups, but its relatively greater size and depth are in keeping with the size of the animals. Five mounted deer in the 'red' pelage are shown, with a sixth painted in the distance of the background, the whole exhibit representing a midsummer scene in a boggy forest of the Adirondack Mountains.

The mounted animals comprise a family of three—buck, doe, and spotted fawn—as well as two yearling males, or 'spikehorns.' They are grouped attractively on the sphagnum-covered floor of deciduous woods, amid fallen logs, sprouting maples, and pools of stagnant water. The background carries the picture across a stump-filled pond of the Cranberry Lake district.



Interlocked deer antlers, shown in connection with the deer group. The victims of this combat were found dead of exhaustion and starvation near Penniac, New Brunswick. At the points of overlapping, the horn has been worn deeply by the long struggle of the rivals.

The handsome buck is 'in the velvet,' that is, his antlers are still covered with the delicate skin which is shed, or rubbed off, only when the horn has attained its full size, after about



WINTER DEER

three months' growth. The fawn, with its snowy-spotted yellow coat, and ears cocked awry, is standing at attention, while one yearling is drinking, the other characteristically scratching its snout with its hind foot. But most beautiful of all the animals is the doe, the central figure, balanced gracefully on three legs, and raising her aristocratic head in the wilderness *qui vive*. In faithfulness to nature and artistic feeling this animal is a first rate example of modern taxidermic craft.



Locked mule deer antlers.

The entire material of this group, including the sketches for the scene, the skins, skeletons, and casts of the animals, together with the stumps, trees, and bushes that comprise the foreground, was secured near Cranberry Lake. Five thousand leaves are reproduced in the exhibit. It embodies at least one feature which is distinctly new — the natural daylight



Locked moose antlers.[1]

[1]The illustrations of moose and mule deer antlers are used through the courtesy of the 'Bulletin' of the New York Zoological Society.

effect which is obtained by artificial means through the use of nitrogen-filled lamps and a newly invented color screen which eliminates the excess of red and yellow rays, giving a light equal in color value to daylight. The group was executed by Robert H. Rockwell, and the background painted by Herbert B. Judy.

R. C. M.

CLOISONNÉ ENAMELS

BY A WORKER IN THE ART

THE writer has been asked to give some account of Cloisonné, of which the Chinese is but a part, though one of the more complete and important developments, as an art of general interest.

The word '*cloisonné*' is the modern name applied by us, but the art itself was in use over three thousand years ago among the Egyptians, and after that among the Persians and the Indians, as well as the Chinese and Japanese. It penetrated all Europe at a certain epoch and was known to the Greeks and the Romans, and was until lately and perhaps still is in use in Central Asia. The art itself has therefore been called by many names. The name cloisonné comes from the French word 'cloison,' meaning a partition or fence. In the middle ages a Latin word having the same meaning was used.

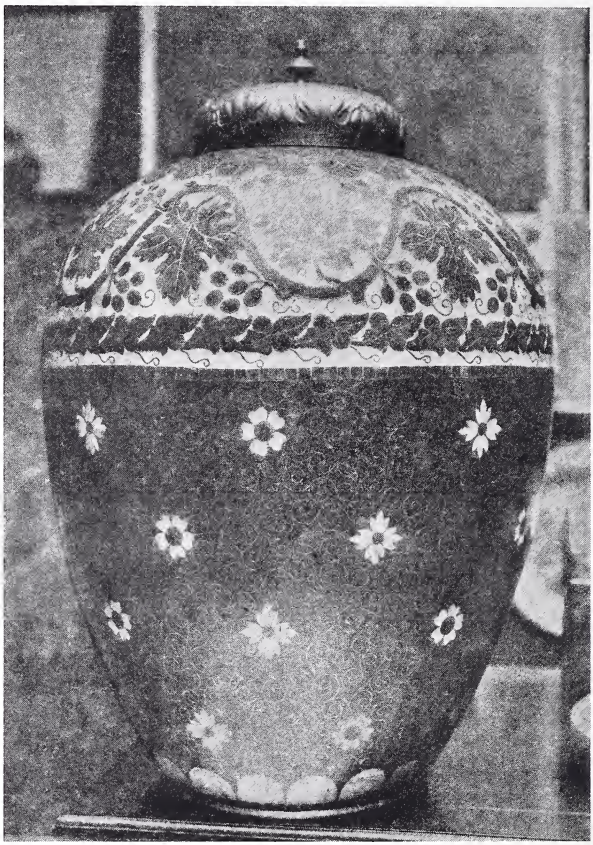
'Cloisonné' is, therefore, 'partition work,' and the underlying principle is that of the honeycomb; the bees build up in wax cloisons which they fill afterwards bit by bit with liquid honey.

Hence, when one looks at a piece of cloisonné he must realize that the gold threads are metal cells, running down some distance like the cells of the honeycomb, but all bent in metal, piece by piece, instead of being in wax. Each piece has been delicately formed and soldered on a metal ground, and when this part of the process is finished, thousands of narrow ribbons cover the surface.

Into each of the holes formed by these intersecting ribbons is placed enamel in powder, corresponding to the honey; and when all are filled the object is fired, and the enamel is melted. The holes and depressions remaining are filled again and the firing repeated, after which the surface is

polished smooth and the wires are gilt by mercury amalgam, the mercury being eliminated by heat.

This is both a delicate and a laborious process, and however small the object it has the quality of monumental art in mosaic. In China and Japan, cloisonné pieces have been



VASE IN CLOISONNÉ
By CLEMENT HEATON
Purchased by the Duke of Westminster for Eton Hall, Chester, from one of the early exhibitions of the "Arts and Crafts," London.

in use for centuries in the Temple and in the Royal and Princely palaces. In fact, wherever cloisonné has been practiced it has attained this character of a monumental and precious, and mostly a religious or imperial, art. It is our forgetfulness of past epochs alone which has led it to be

associated with the far East only, or still more, which has led it to be viewed as a commercial article, since the Japanese have put modern pieces upon the western markets when their supply of ancient examples has been exhausted.

The pieces in the Avery Collection in the Museum are of genuine ancient type and have an historical and ethnic value as well as being decorative works. This art in China



VASE IN CLOISONNÉ
By CLEMENT HEATON
Exhibited in the Salon, Paris, 1901, and purchased by the Swiss Government.

for centuries has been practiced as a craft, the tradition of which goes back to the night of time, and is forgotten. Thus by long practice, and aided by persistent patronage of the rich and powerful, mastery has been attained. It is with this as with the arts of the West, which flourished in the Middle Ages, and only in vain are such things attempted in a hasty way and with insufficient support. Lack of

tradition and continuity makes us impotent to produce work which will compare with that of peoples whom we look down upon as inferior to ourselves.

It is not merely this however, which hinders our production of such things or prevents our adequate appreciation of what is brought to us: there has been, ever since the time of Michael Angelo, a persistent trend of thought encouraged in Europe, from which it has been made to appear that decorative or ornamental effects are inferior to the realism aimed at by modern art. It is assumed that architectural design and beautiful effects of color associated with it are easy to produce and are of no particular value when obtained; so that, while large prices are paid for imitative pictures, textiles and enamels are neglected. This point of view is now disappearing. The more cultivated the people the greater their appreciation of those forms of art which have been carried on during thousands of years by the most powerful nations of the earth, arts so extensive and ancient that our modern forms are ephemeral and local in comparison with them.

We may then usefully consider the cloisonné of 'the heathen Chinee' as only a survival of a more ancient art; in India cloisonné was very extensively practiced and fine examples remain, but its greatest centre was the court of Persia, where marvelous work was done earlier than our era.

The high plateaus of Central Asia are rich in minerals, and here, for an indefinite period, jewelry in gold and colored inlay has been made in the form of cloisonné. This still persists or did till recently, in the form of true cloisonné in silver and turquoise, which was extensively used to decorate delightful horse trappings, sword and dagger sheaths and buckles for women. In this district the great bird called the Lammergeier[1] is seen soaring over the mountains, and

[1]The Lammergeier (Gypaëtus) is a bird like the eagle, having however a beak different from the usual hook of the eagle group.

symbolical representations of this kingly bird were made as badges, in gold and garnets. These, dating from about the sixth century, have been found in France and Lombardy, carried there by the Franks and Lombards, people of kindred origin as shown by their arts, who came originally from the East or at least received their arts from there. The Lammergeier is affirmed to be the origin of the Prussian Eagle. It is now known that Europe was indebted for its art during the early middle ages to the Caucasus. In Bactria, superb pieces of cloisonné in gold have been found on the River Oxus.[2]

When Justinian, born among one of these peoples came to the Imperial throne of Byzantium, this court had become thoroughly permeated by the influence of Persia and the peoples living around the Empire. So cloisonné came to be the highest form of art in the Byzantine court and was used at St. Sophia for the High Altar as well as in the palace. Small pieces of such work have escaped destruction, and some are to be seen in the Morgan Collection at the Metropolitan Museum of Art. Large and important examples are to be seen at Venice, at Milan, at Limburg, and others are at Monza, Sienna and elsewhere.

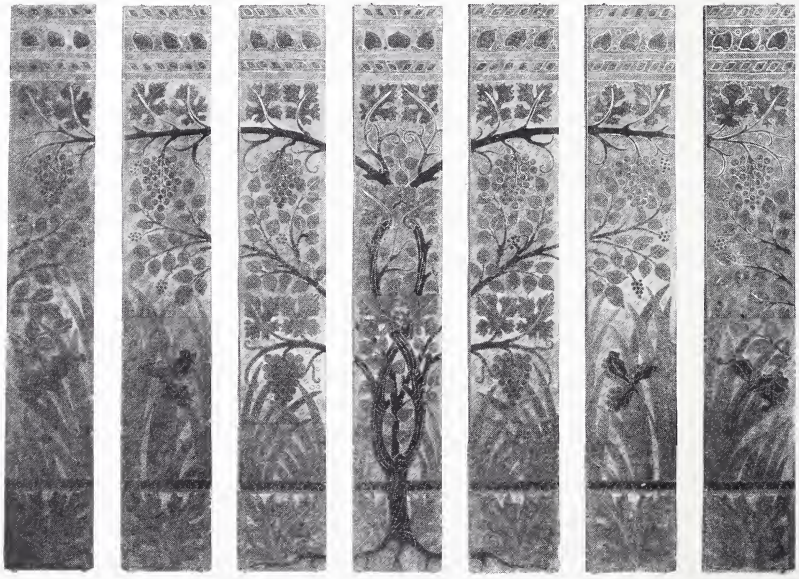
Much of this work is in the earlier form of an *inlay* of precious stones in gold cloisons; the later form is however in enamel. But all is true cloisonné, and the special form of *inlay* can be traced back to Egypt at least two thousand years B. C. Here, important pieces in gold have been discovered in the form of symbolic pectorals placed on the breast of the royal body in the mummy-case. Rings, bracelets, and other things were in use however, and if some of them have survived, many more must once have existed and have been destroyed.

It was the same in Greece to some extent and still more so in the middle ages in the west of Europe. Here, owing to the influence of the Byzantine court, for centuries enamel-

[2]See Baldwin Brown, 'The Arts and Crafts of Our Teutonic Forefathers.'



MANTEL PIECE AND TWO VASES IN CLOISONNÉ
By CLEMENT HEATON
Executed for a house in Neuchâtel.



PANELS IN CLOISONNÉ
By CLEMENT HEATON
Made for a back ground for a bronze statue in Dresden.

ling in the form of cloisonné (or its derivative, champléve,) was used largely on the banks of the Rhine, for reliquaries and other sacred objects, just as it was in Japan and China. Cloisonné was made also at Conques and at Limoges in what now is France, and also in other centers. These objects were generally made in monastic workshops, and



PLAQUE IN CLOISONNÉ, 'THE CASCADE'
By CLEMENT HEATON
Exhibited in the Salon, Paris, 1897.

here the art of glass painting was first carried on, as described in the writings of the Monk Theophilus, a German craftsman of the twelfth century.

In England, cloisonné was practiced in Anglo-Saxon times; there was relationship between the Kentish court and Byzantium, and great circular fibulae decorated with such

inlay were imported from the East or copied by local artificers from Oriental models.

Such things had considerable effect, along with the silk textiles and ivory carvings in fixing the taste of the early Middle Ages in Europe, and it was not until early in the fourteenth century that other ideas excluded them.

It is, therefore, really necessary, if a true comprehension of the world's art is to be had, that the art of cloisonné be understood and given its proper place.

It was at the exhibition at Paris in 1900, where exquisite forms of oriental art were brought into comparison with modern western ideas, that a cultivated Parisian lady said: 'It is we who are the barbarians.' Since then, the increasing vulgarity and aimlessness of so much of European art, and a marked tendency to revive decorative forms, make it evident that we have been living on an erroneous philosophical inheritance.

*The writer's interest in cloisonné was awakened many years ago by seeing in London an enamelled plaque from Damascus. At that time a considerable amount of decoration was done in England for churches and public buildings, and great difficulty was experienced in getting any form of decoration to resist the dampness of the climate. The idea occurred to the writer that this kind of cloisonné would meet the end desired, and a reredos for a church in Chester for the Duke of Westminster, and another for Norman Shaw started the work. This led to the execution of large vases, two of which were purchased by the Duke of Westminster and others by persons in London. A large decoration for a church near Dublin also was executed, and a corresponding portion was done in Neuchatel, Switzerland, some time after. This led to a request for cloisonné decoration surrounding some frescoes already executed in the vestibule of the Art Museum of Neuchatel. This work, favorably

*By special request, Mr. Heaton has demonstrated in the following paragraphs that modern cloisonné as a decorative art can be applied successfully to-day.
—The Editor.

received, led to all sorts of commissions for decorations in cloisonné and repoussé enamel and others of an analogous nature.

On the whole, however, it was found that the European public was ignorant of what was meant by cloisonné,



VASE IN CLOISONNÉ
By CLEMENT HEATON
In the possession of the Secretary of the American Embassy at Paris.

and in England when several of the first sculptors, Royal Academicians, wanted to use it (as they sometimes did) their clients made objections. To meet this prejudice the whole history of the art was worked out with the result above sketched—the demonstration that cloisonné is a decorative art of antiquity and of highest value.

In Central Europe there was much more interest and much less prejudice. The Museums of Decorative Art in Berlin, in Vienna, and in Geneva, each purchased specimens as did also the Swiss Government. The author was elected Associate of the Société Nationale at Paris for his exhibits of cloisonné, and l'Union Centrale des Arts decoratifs' at Paris purchased an example of his work, now exhibited in the Louvre.

The art of cloisonné was formerly associated with glass mosaic and with stained glass, and is from its very nature a monumental and sumptuous art. Its possibilities would be great, and if interest in such things is renewed in America, it is greatly to be desired that this art of olden times may be revived, and take its rightful place among the arts which have come down to us through the ages.

C. H.

NOTES

The Brooklyn Museum is represented in several of the departments of the Panama-Pacific Exposition. The Library of the Museum has a display of photographs in the Educational Building, showing the reading rooms, including the unique arrangement in housing periodicals, and the 'Enemies of Books' exhibit in the Library. This collection was originally sent to the Leipsic Exhibition of Graphic Arts, but at the outbreak of the war was transferred to San Francisco.

In the Pavilion of the City of New York at the Exposition, there are a number of large photographs showing the Museum building and galleries and museum exhibits in detail. This exhibition is made in conjunction with the American Museum of Natural History, The Metropolitan Museum of Art, The Bronx and The Brooklyn Botanical Gardens, and other institutions of Greater New York.

The United States Loan Collection, in the Department of Fine Arts, includes the following paintings from the Museum's permanent collection:

Meadow Flowers, by John H. Twachtman; Portrait of George Taylor, by Rembrandt Peale; The Sketcher, by Daniel Huntington; Picnic in the Catskill, by Henry Inman; The Unruly Calf, by Winslow Homer; and Centauress, by John La Farge.

William Henry Fox, Director of the Museum, was a member of the International Art Jury of Awards of the Exposition, and acted on the Jury for Sweden, together with the Swedish Art Commissioner. Sweden fared well at the hands of the Jury. Out of the catalogued list of ninety-four exhibitors, that country was awarded two grand prizes, two medals of honor, thirteen gold and thirteen silver medals, a record unequalled by any other foreign section.

With the approval of the Commissioner General of Sweden, and coöperating with the Swedish Art Commissioner, the Director of the Museum has organized a circuit exhibition of the Swedish group of paintings. The tour will open at the Brooklyn Museum in January, next, following the close of the Exposition at San Francisco. It will include Boston, where the collection will be seen under the auspices of the Copley Society; Philadelphia, at the Pennsylvania Academy of the Fine Arts; at the museums of Chicago, Cleveland, Detroit, Indianapolis, Minneapolis, Toledo, and St. Louis, and dates are under consideration with other cities in the West. The Exhibit consists of paintings in oil and water colors, engravings and etchings, and sculpture in marble and bronze. A special catalogue is being prepared by Dr. Christian Brinton, the

well known authority on Scandinavian Art. It will have an introduction on the art of Sweden and a cover designed by Gustaf Fjaestad, one of the exhibiting artists.

At the thirty-third annual congress of the American Ornithologists' Union, held within the grounds of the Panama-Pacific International Exposition at San Francisco, May 18-20, 1915, the Museum was represented by Mr. Robert Cushman Murphy, curator of mammals and birds. Mr. Murphy opened the public sessions of the congress with a paper entitled, 'Notes on the Life-History of Penguins, with special reference to the Origin of Certain Instincts.' On May 20, he addressed the assembled delegates of the California Federation of Women's Clubs, in San Francisco's new Civic Auditorium, the subject being the work of the National Association of Audubon Societies. He endeavored particularly to arouse sentiment against the smuggling of heron plumes into California from Mexico, considerable evidence of contemporary plume hunting in the swamps of the Colorado River having been obtained during the Museum's Lower California Exposition.

The activities of the American Ornithologists' Union meeting, in addition to many papers on bird life and bird conservation on the Pacific coast, included field trips to Mt. Tamalpais and the Muir Woods, inspection of the collections in the California Academy of Sciences and the Museum of Vertebrate Zoology at Berkeley, and a day's trip on the United States Fish Commission steamer *Albatross*.

Two Museum field parties spent several weeks of the spring in the far west engaged in work for the completion of the half-finished 'Desert Life Group' and other natural history exhibits.

Mr. H. B. Tschudy, Museum artist, and Mr. Antonio Miranda, modeler, spent part of April at Tucson, Arizona, completing the studies for the scenery of the desert group, and obtaining specimens and reproductions of the various smaller desert plants. The original work on the remarkable vegetation of this region was done under the direction of the late Curator Morris in 1913, replicas of the giant cactus, choya, ocatilla, etc., having been made subsequently at the Museum, as described in the *Quarterly* for March, 1914.

For the purpose of collecting pronghorn antelope and other desert animals to be used in the exhibit, and also of observing the interrelations of plants and animals in a region of maximum aridity, Mr. R. C. Murphy, acting curator of natural science, and Mr. R. H. Rockwell, chief taxidermist, spent the latter part of March and most of April in the rainless basins and mountain valleys of northeastern Lower California. The territory covered during the course of the trip included the Mexican portion of the Imperial Valley, the flood plain of the western, or Hardy, branch of the lower Colorado River, and the hot,

alkaline sink of the Laguna Salada, which is a Lower California counterpart of the Salton Sea.

Material illustrating the effects of a desert environment in producing specialization was obtained, much of which will be installed in the desert exhibit. In scientific value, the collections and observations are particularly important, since they refer to the biota of one of the least known sections of the North American continent. The members of the party had a number of exciting experiences, owing to shortage of drinkable water, challenges by Mexican territorial rurales, and association with exceedingly primitive, though friendly, Indians. The thanks of the Museum are due to Col. Esteban Cantù, Military Commandant of Lower California, whose cordial assistance contributed largely to the success of the expedition.

In the Department of Natural Science gifts have been received from the following persons: Ernest L. Bell, Dr. Frank Overton, Mrs. Reed, Arthur H. Helme, Prospect Park 'Zoo,' New York Zoological Society, Sidney T. Marion, and Miss C. J. Ellsworth.

Miss R. A. Polhemus has enriched the decorative arts section of the Museum by a loan of old lace, embroideries, and brocades. The collection is rare and interesting and is installed in the east wing of the Museum. It numbers over one hundred pieces. It consists of examples of Sicilian and Abruzzi colored and white filet; blue and white Perugian covers with bird and animal figures; linen covers of red silk Sicilian embroidery trimmed with Venetian needlepoint insertion and border; beautiful specimens of point plat de Venise, point de Venise, Venetian needlepoint, Brussels point, and many pieces of Flemish and Milanese bobbin lace; a collection of fine Brussels point collars, a quaint cap and handkerchiefs of the same lace. The ecclesiastical pieces include a cope of red and gold brocade of the early eighteenth century, with a Cardinal's coat-of-arms embroidered in the corners, also chasubles, stoles, and chalice covers. There is a large handsome cover of Rhodian embroidery, linen worked in red silk, and a smaller piece in primitive scarab design worked in green and red. The collector prizes a piece of this old Greek handicraft. There are several large covers of rich brocades thickly woven with silver and gold thread of the seventeenth and eighteenth centuries, Italian and French.

The collection is in part inherited and in part the result of many years of careful and highly discriminating collecting in Europe by Miss Polhemus. This is not the first time the Museum has benefitted through the interest and generosity of the Polhemus family. Mrs. Caroline H., widow of H. D. Polhemus, established the Polhemus fund and bequeathed a valuable collection of paintings to the Brooklyn Institute in 1906.

The following recent accessions have been recorded in the Department of Fine Arts: An American chest, eighteenth century, and a black chair, gifts

of George D. Pratt; an early American stove, eighteenth century, gift of John Hill Morgan; landscape, 'Pasture near the Dunes' by Willem Roelofs, gift of Charles Hathaway; Egyptian pottery jar with lotus ornament, from the Abu Simel in Nubia, gift of Mrs. Alfred T. White; the Samuel P. Avery silver medal, a replica of the medal presented to Mr. Avery in commemoration of the gift of the Avery Library building, Columbia University, on June 2, 1915, gift of Robert B. Woodward; the Samuel P. Avery bronze medal, gift of George F. Kunz; eighteen water colors by Winslow Homer, loaned by Mrs. N. T. Pulsifer; thirteen water colors by Winslow Homer, loaned by Mr. and Mrs. Charles S. Homer; five pieces of German Renaissance ceramics, loaned by E. Colonna; portrait of Anstice Greenleaf (Mrs. Ben Davis) by John Singleton Copley, purchased by special subscription; and slate top Lowboy, purchased from the Batterman Fund.

The portrait of Lydia Field Emmett by William M. Chase, recorded incorrectly in the *Quarterly* for April, 1915, was acquired through the generosity of the artist.

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COLONEL ROBERT B. WOODWARD

ROBERT B. WOODWARD
1840-1915

In the death of Robert B. Woodward, the Museum has lost one of its greatest benefactors. A native of Brooklyn, Colonel Woodward died at Cooperstown, New York, on September second. He was vice-president of The Brooklyn Institute of Arts and Sciences, and chairman of the Governing Committee of the Museum. It will be remembered with enduring gratitude by the public that he supported the Museum with personal effort and with liberal gifts during his lifetime and provided for it munificently in his Will. With deep appreciation, the members of the Museum staff recall, that from the beginning of their relationship with him, he gave them the stimulus of his encouragement, and the wise counsel of his broad understanding. His enthusiastic interest, which extended to every department of their work, was characterized by a sympathy such as can flow only from the heart of a true friend.



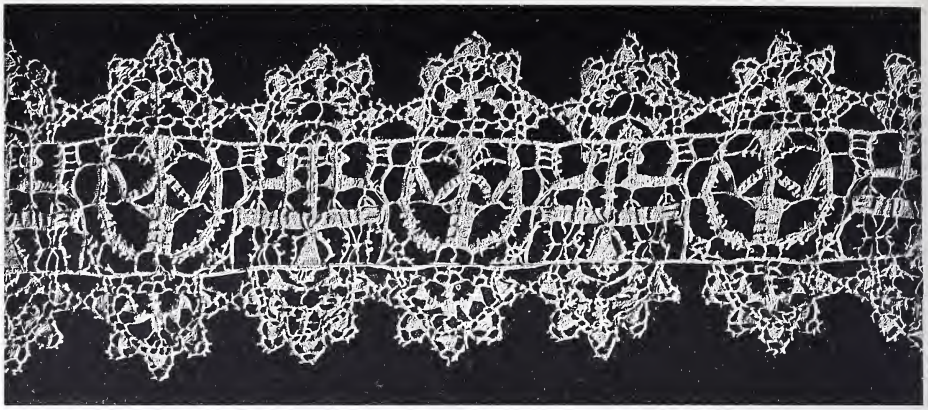
POINT D'ALENÇON
LOUIS SEIZE WAISTCOAT

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THE WOODWARD COLLECTION OF OLD LACE

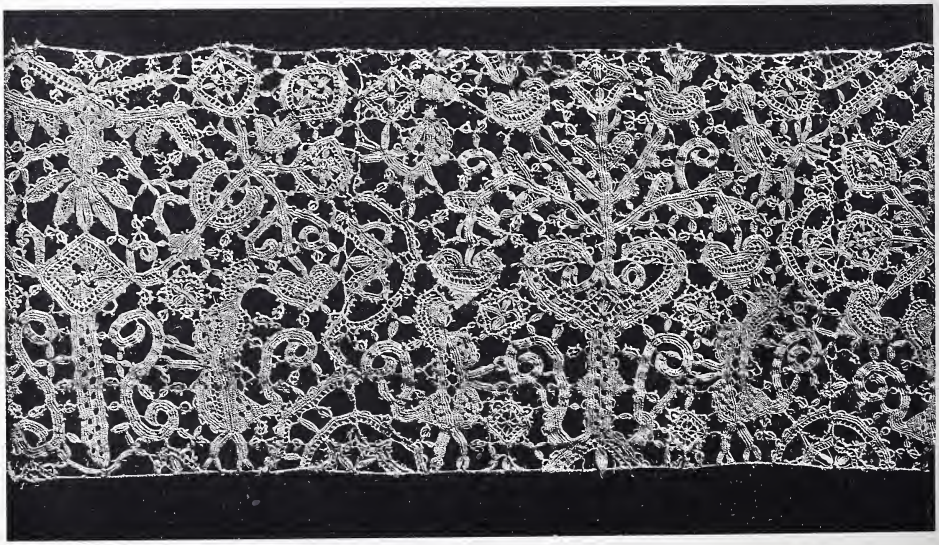
UNTIL March 1915 the Brooklyn Museum's only representation of lace in its collection of decorative arts was a few pieces of Brussels point. Then, in part by the aid of the E. C. Woodward fund established by the late Colonel Robert B. Woodward, and in part by a fund contributed by him especially for the purpose, the trustees were enabled to acquire a lace collection of very great distinction. As a beginning, some examples were obtained at the d'Avaray sale in February, 1915. With the nucleus of the collection thus established the number of specimens was increased by the purchase of one hundred and sixty-one pieces of antique lace brought shortly after to the United States, and known among connoisseurs as the Besselievre collection from the name of the well known Parisien amateur of laces and textiles, Count de Besselievre, who had devoted twenty-five years to its formation. This collection is extraordinarily rich in Italian-made lace, although it includes excellent French and Flemish specimens. As a comprehensive exhibit of old Italian lace especially, it has the highest educational value, and is to be ranked among the most useful collections established in the interest of the American public. Colonel Woodward broadly viewed the Museum's needs, but his individual taste for the products of the delicate art of lace making undoubtedly stimulated this purchase.

It is a significant circumstance that the Besselievre collection was assembled by a man, and that a man acquired it for the museum. The appreciation of the gossamer fabric is by no means confined to the gentler sex, although it is traditional to attribute the passion for lace which is

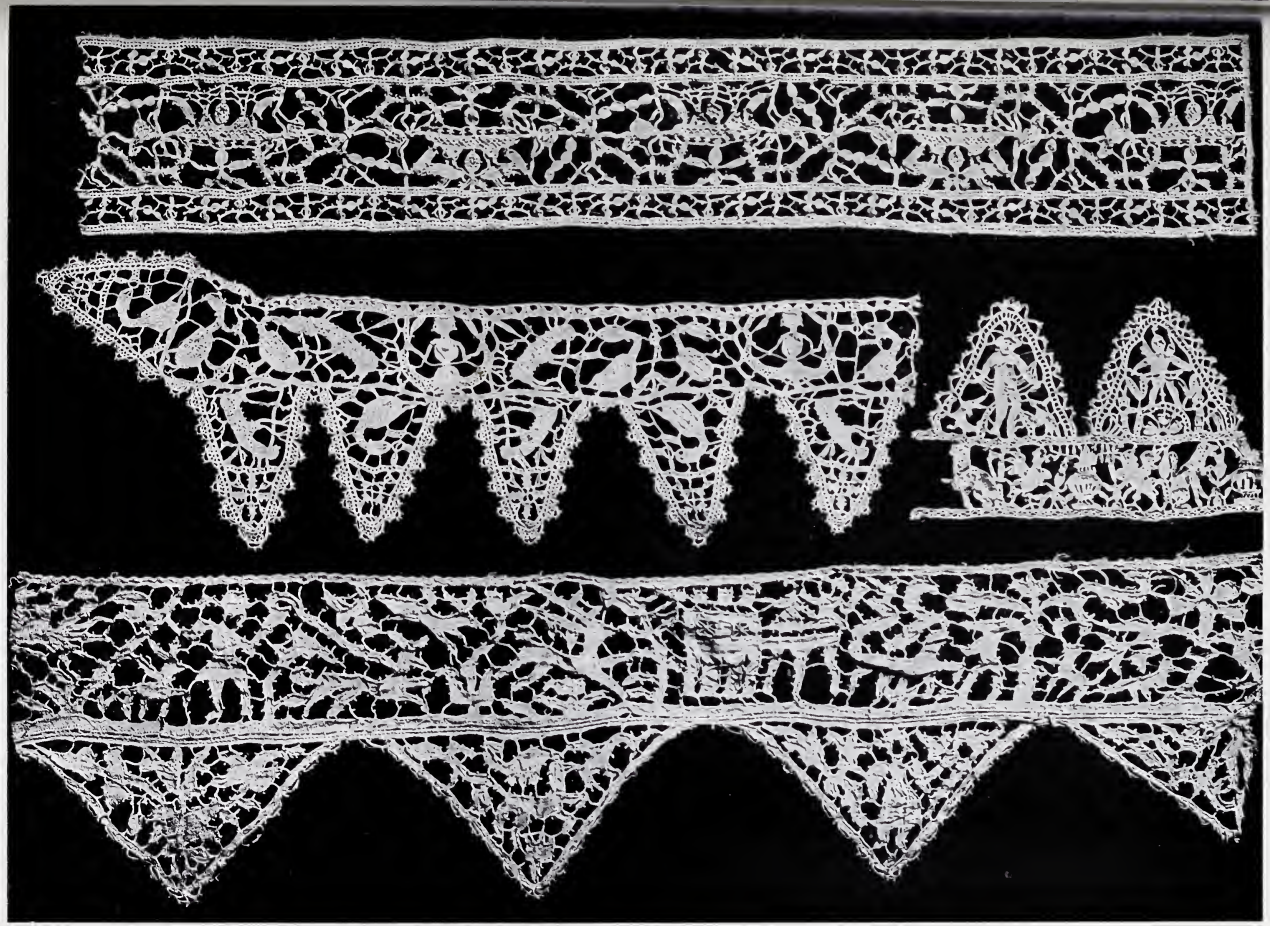


POINT DE VENISE—SIXTEENTH CENTURY.

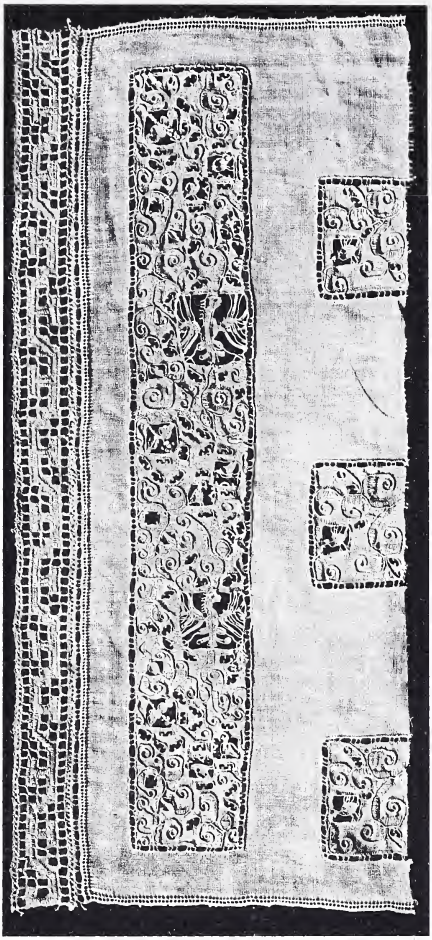
found so generally among women to their instinct for luxury. It must not be forgotten however that lace formed the most characteristic note in the dress of both sexes in the richest periods of costuming, and it has also figured prominently in religious ceremonial from the earliest times. Thus in its origin having no exclusive relation to women, it has on the other hand inspired much



VENETIAN RETICELLA—SIXTEENTH CENTURY.



FOUR SPECIMENS OF POINT DE VENISE—SIXTEENTH CENTURY.
THE LOWER ONE 'PUNTO TAGLIATO,' SHOWING FIGURES, BIRDS AND ANIMALS.



DRAWN LINEN AND POINT DE VENISE. 'PUNTO IN ARIA.' EARLY SIXTEENTH CENTURY.

masculine thought. Napoleon's comparison of Antwerp Cathedral to Mechlin lace is a familiar instance.

The establishment of a good lace collection at the Brooklyn Museum is timely. There are at present in this country, and especially in New York and its surroundings, many foreign-born women who through inheritance have a genius for this industry. Normal immigration has brought them in large numbers to the United States. It is natural to suppose that this influx will increase enormously at the conclusion of the war in Europe. Many projects are on foot to found schools of lace making to turn the talents of the new comers to economic account. With such distinguished models as the Woodward lace on permanent exhibition available for study, the Brooklyn Museum, while fulfilling its educational office, will undoubtedly aid this movement.

From the historical and esthetic standpoint, the collection is extremely interesting in that it covers three of the best centuries of lace making and it is supreme in quality—that elusive excellence, difficult to define yet always felt in the best works of art. It is not the fabric, the design nor the age alone that makes the quality of these lovely pieces

of lace; it is perhaps the combination of all three that gives them distinction and charm.

One of the most interesting collections of lace brought together in Italy in recent years, was seen at the exhibition of the Ornamento Femminile held at Rome in 1908, when the aristocracy of all Italy lent its heirlooms for the benefit of the movement to encourage the revival of the lace industry among Italian women. Both the Queen of Italy and the Queen mother Margherita were contributors. An examination of the catalogue, for comparison both as to text and plates, shows the Woodward gift to be of the same lofty standard.



POINT DE VENISE. 'PUNTO IN ARIA.' SIXTEENTH CENTURY

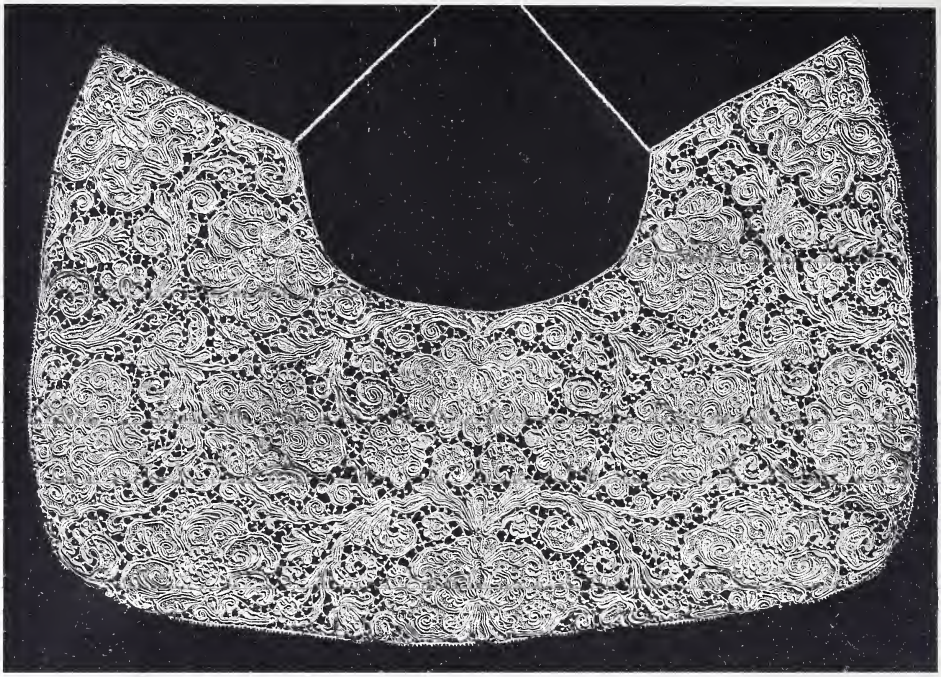
The Venetian needlepoint of the sixteenth and seventeenth centuries is representative of the strength of the collection as a whole. This early division includes many exceptional specimens of both centuries of reticella, punto tagliato, punto in aria and punto di Venezia. Many of the pieces are adorned with figures of animals and people, birds, armorial bearings and religious emblems. One unusually fine sixteenth century specimen is punto di Venezia reticello showing groups of court ladies. This epoch also includes interesting Gothic and Renaissance patterns. From the d'Avaray sale there is a distinguished sixteenth century piece of Renaissance design of scrolls and animals in the form of a cavalier's manche or cuff of Point de Venise d'or. A sixteenth century altar cover of



MANCHE OR CUFF OF
POINT DE VENISE D'OR
LATE SIXTEENTH CENTURY
RENAISSANCE DESIGN



POINT DE FRANCE
AN ALLEGORICAL DESIGN
SHOWING THE CROWNING
OF LOUIS XIII



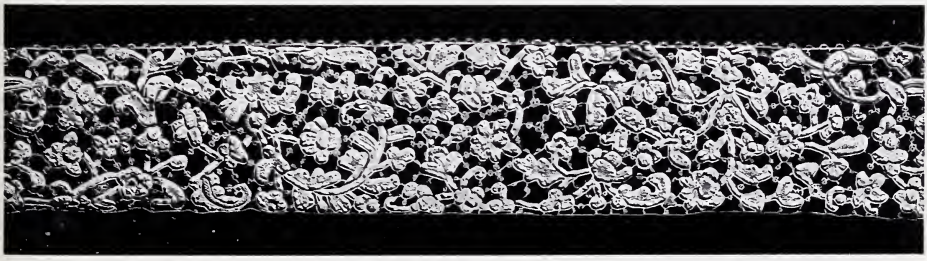
POINT COLBERT SEVENTEENTH CENTURY
DOGE'S PELERINE—A UNIQUE PIECE



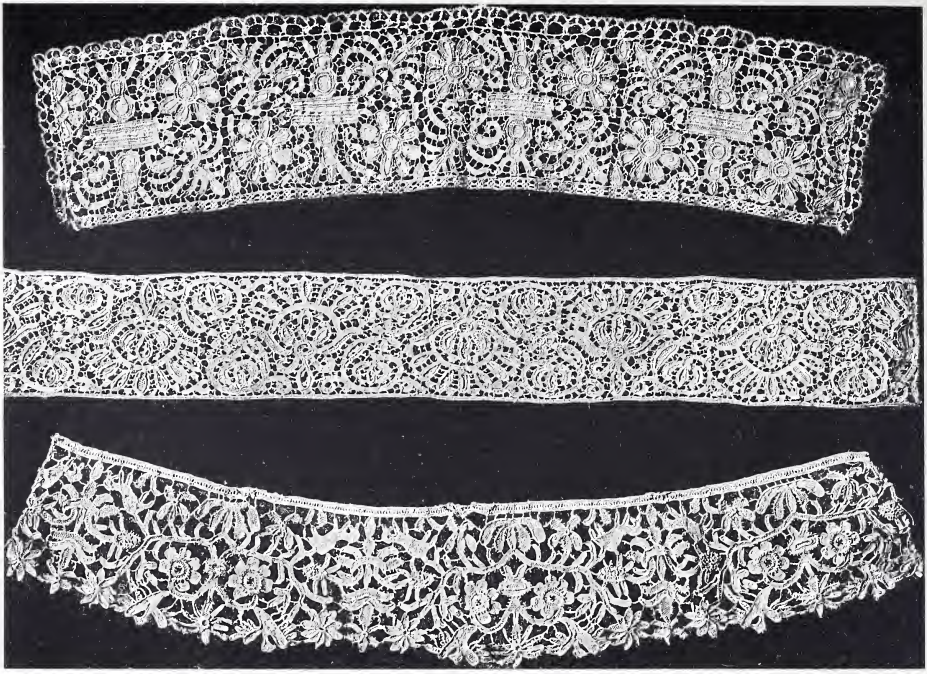
GROS POINT DE VENISE—WITH BORDER OF 'PUNTO IN ARIA.' SEVENTEENTH CENTURY.



ALTAR CLOTH—GROS POINT DE VENISE—SEVENTEENTH CENTURY.



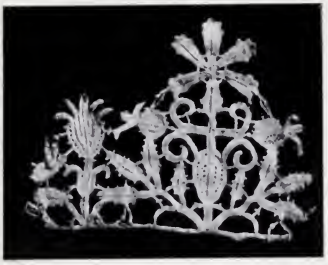
POINT DE VENISE AU LACET—SEVENTEENTH CENTURY.



POINT DE VENISE—'IVORY POINT.'
EARLY SEVENTEENTH CENTURY.



ALTAR COVER OF POINT DE VENISE AND EMBROIDERY.
EARLY SEVENTEENTH CENTURY.
REMARKABLE FOR THE FIGURES IN POINTS AND INSERTION.



POINT DE VENISE—
'PUNTO IN ARIA.'
SEVENTEENTH CENTURY.

embroidered linen is combined with exquisite point coupé, and a fragment of an altar cloth of embroidered linen with punto in aria. Of this period also there are a number of unusual pieces of Abruzzi and Sicilian filet, one piece representing the Sacrifice of Isaac, and many pieces of Sicilian drawn linen often combined with embroidery, showing allegorical figures and animals. Each piece of this epoch, and in fact of the entire collection, is made within the period to which its design relates.

Of the seventeenth century there are specimens of Sicilian drawn work combined with punto in aria, thus establishing the fact that some of the 'Sicilian' work was made in Venice. There is a very remarkable strip of drawn batiste and needlepoint displaying innumerable designs. An unworked end of the batiste shows it to be as sheer as a cobweb.

There is much Venetian needlepoint of this century. Of several altar covers two are remarkable for the human figures in borders and insertion of point de Venise, and a Gothic design woven in the tissue of the linen.

There are numerous examples of Gros point de Venise favored by the Spaniards as its breadth and ornateness of design reflect some-



POINT DE VENISE—
'IVORY POINT.'
XVII CENTURY.



SICILIAN DRAWN LINEN.
EARLY XVII CENTURY.

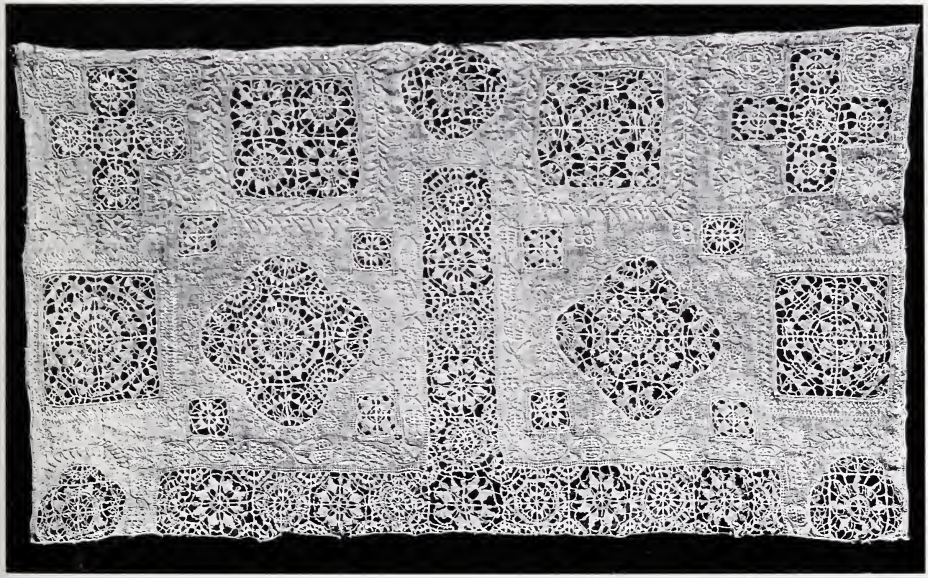
thing of the grandiose inherent in the Spanish character. The rosaline variety of point de Venise is shown in a number of beautiful specimens, and some handsome pieces of point de France, in one the design is an allegory showing the crowning of the youthful Louis XIII.

Point de Milan is an important part of the collection; many of the pieces are profusely adorned with figures; in a rococo hunting subject they are worked in Gros point de Venise. Among the specimens of this century acquired from the d'Avaray collection is a handsome reticello border of Gothic design, and a point de Venise collar of Renaissance design. Point de Venise au lacet, flat point pillow-made tape lace with needle-point fillings, Burano point collars and barbes, and some Genoese pillow-made pieces complete the list of Italian lace of this brilliant epoch of lace production.

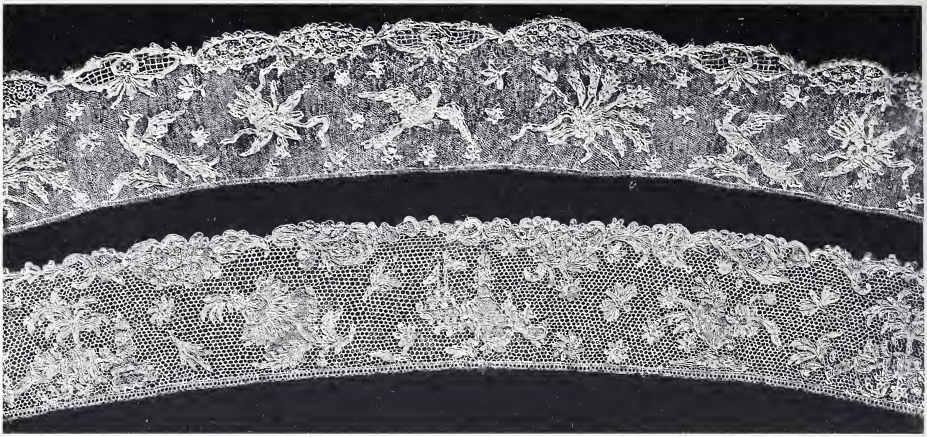
The seventeenth century famous for the activities of Colbert is especially interesting for the student of lace, on account of the establishment of French schools for lace making in imitation of the

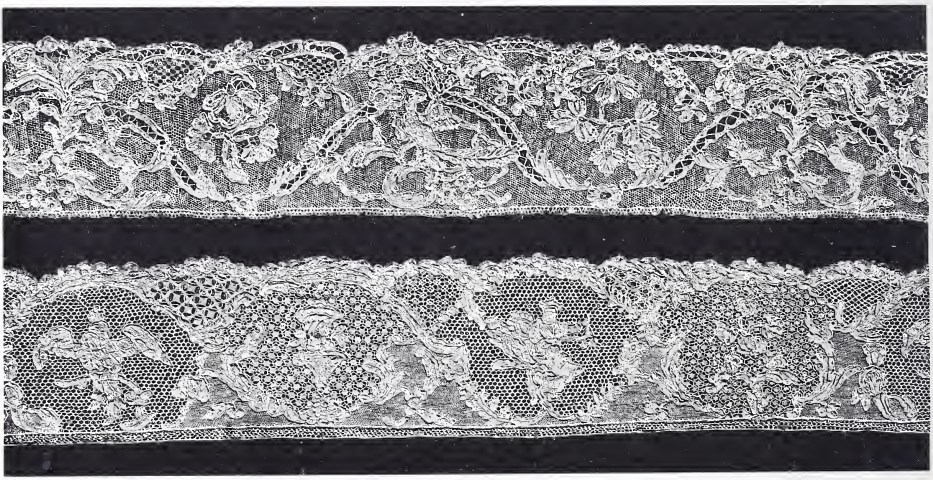


DRAWN BATISTE. SEVENTEENTH CENTURY.
VERY FINE SPECIMEN.

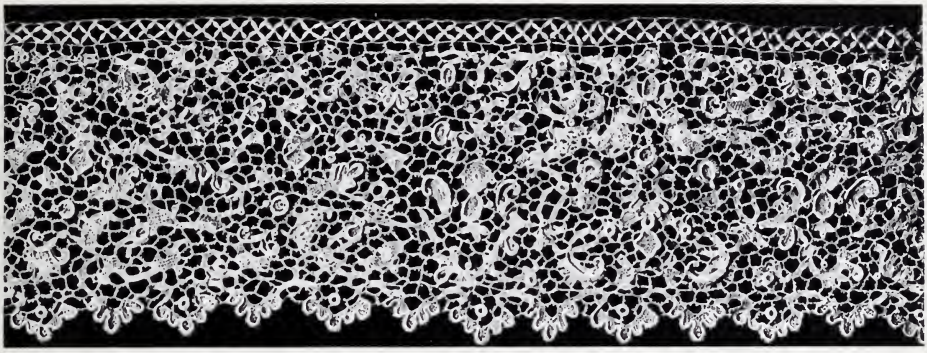


EMBROIDERY ON LINEN AND POINT DE VENISE COUPÉ.
SEVENTEENTH CENTURY.



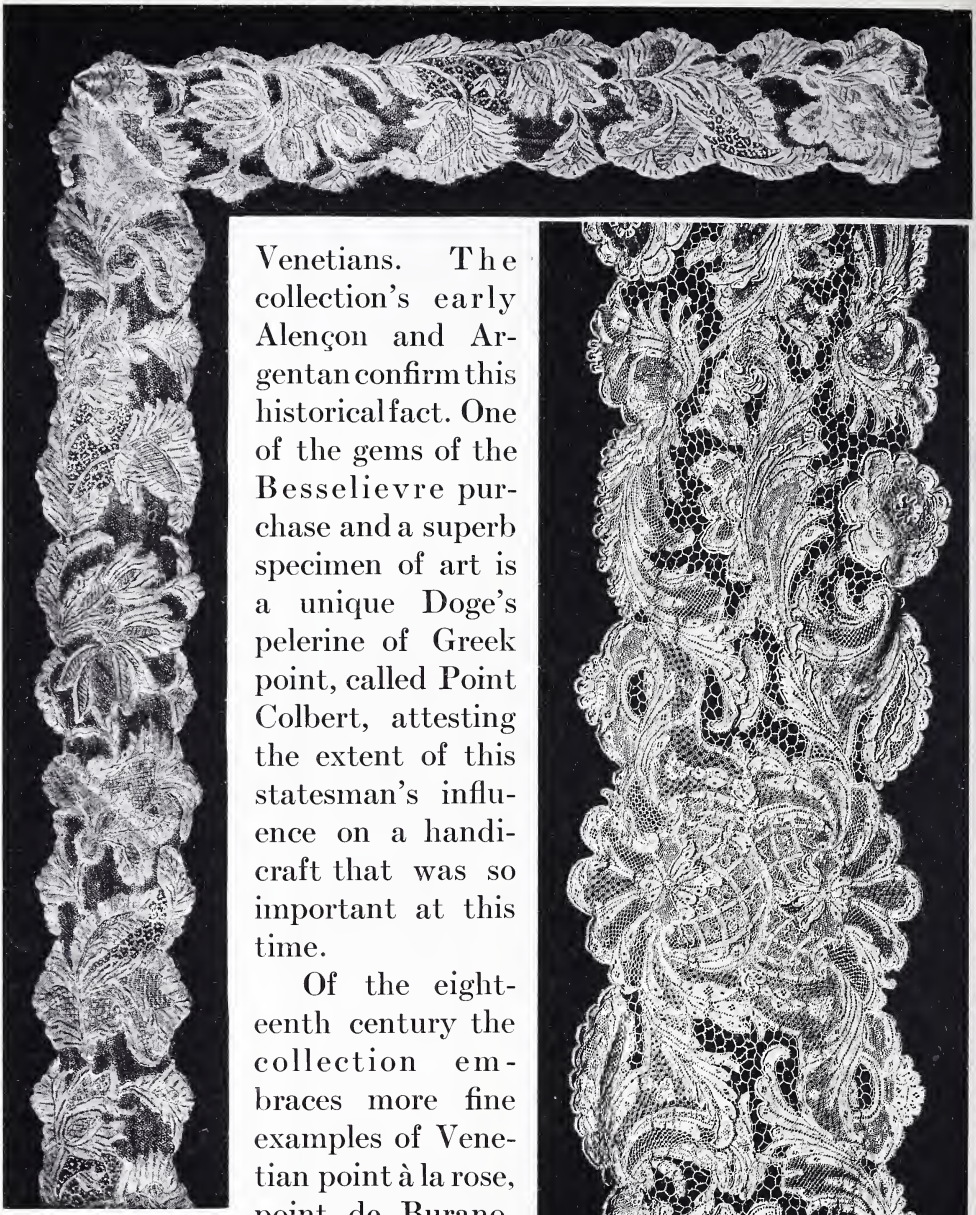


POINT D'ARGENTAN
LOUIS XIV AND
LOUIS XV





POINT DE VENISE À LA ROSE
POINT DE MILAN
XVIII CENTURY

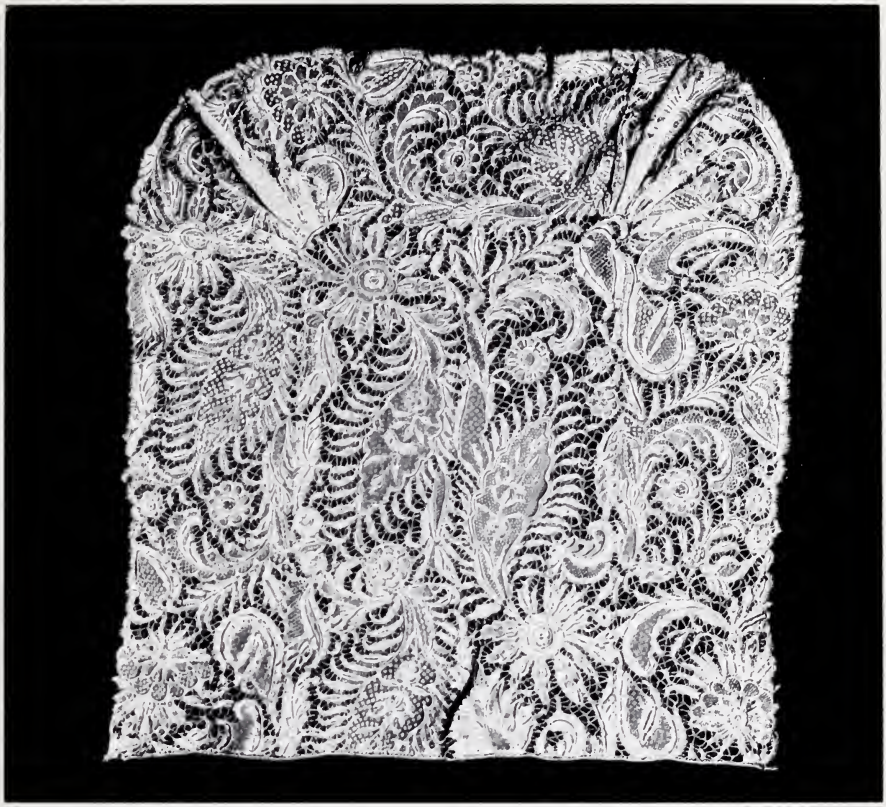


POINT DE BURANO.
XVII CENTURY.

Venetians. The collection's early Alençon and Argentan confirm this historical fact. One of the gems of the Besselievre purchase and a superb specimen of art is a unique Doge's pelerine of Greek point, called Point Colbert, attesting the extent of this statesman's influence on a handicraft that was so important at this time.

Of the eighteenth century the collection embraces more fine examples of Venetian point à la rose, point de Burano, and point de Milan. A flounce of the latter is enriched with coat-of-arms, pavilions, peacocks, wolves, deer,

POINT DE BURANO.
XVIII CENTURY.



POINT D'ANGLETERRE. EIGHTEENTH CENTURY.

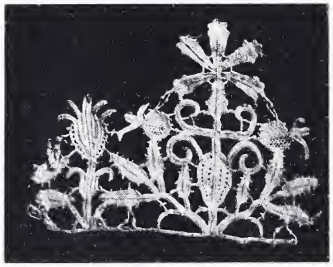
and two caravels under full sail showing the tumbling waves. The lace making industry in France during the same period is shown in some very fine collars and borders of point d'Argentan of rare design, and several important pieces of point d'Alençon. The point d'Alençon group includes a Louis Seize waistcoat which is one of the finest specimens in the Woodward gift. It is of the most exquisite quality and in perfect condition. This too comes from the Besselievre collection.

Barbes of Valenciennes of filmy beauty are to be seen in the French division.

Flanders, the rival of Italy in lace making, is represented by old Binche, barbes and lappets of great beauty of old

Brussels or point d'Angleterre, point de Flandres barbes of both the seventeenth and eighteenth centuries, and exquisite Mechlin pieces—one bearing the Spanish coat-of-arms. There is a late eighteenth century dress front panel of real Brussels ground, point à l'aiguille à réseau. The beautiful needle made mesh is sprinkled with appliqued sprigs of ferns and below is a deep border of applied floral motives.

C. T. D. F.



THE WOODWARD JADE COLLECTION

AMONG the bequests received at the Museum from the estate of Robert B. Woodward, is a collection of 218 carvings in hard stone, mainly of jade and mainly Chinese. As usual in collections of Chinese jade carvings, other semi-precious hard stones calling for a similar miraculous patience and dexterity of workmanship, are included, although the jades preponderate. Among other materials represented are lapis lazuli, rock crystal, agate, cornelian, amethyst, and chloromelanite. Even glass is not excluded, because the Chinese treat it as a hard stone, making their carvings from the solid block, and drilling out the interior when vessels or snuff bottles are in question.

The Woodward collection includes a wide and comprehensive selection of all the various classes of objects which the Chinese have been accustomed to fashion from jade, and other hard stones. The following may be mentioned: flower vases for temple ornament, for palace decoration, and for the houses of the Mandarin and literary classes; ceremonial sceptres, sacrificial vessels, bowls, libation cups, and wine pots; cylindrical holders for brushes (which take the place of pens in China), water coupes, paper weights, and table screens, also for the use of the literary class; inscribed slabs and panels, buckles and clasps; girdle pendants; figurines, mythological animals and symbols, perfume boxes, incense burners, etc. The jade carvings also include various symbolic objects, which were buried with the dead. These are the most ancient surviving forms of jade, occasionally dating to the Han Dynasty, 206 B. C.-25 A. D. Some of the panel carvings are *resonant stones* which were originally suspended and used as gongs or bells, as more specifically mentioned later on in this

article. Occasional use is also made of the natural form of the jade boulders which are found in river-beds. The general form of these suggests a mountain on which landscapes and figures of mythological significance, the so-called 'Hills of Longevity', are carved.

With several other important exceptions, and aside from the 'tomb jades', which are all older than the thirteenth century, the dating of the pieces in the Woodward collection is generally of the eighteenth century, and this is generally the case in similar collections. As regards these eighteenth century jades, we may quote the opinion of Dr. Berthold Laufer, Associate Curator of Asiatic Ethnology in the Field Museum of Natural History at Chicago, who is the greatest living authority on the subject of Chinese jade. Professor Laufer says in his work on the subject: 'The conventional opinion on the decadence of Chinese art during the last two centuries is not upheld, even by a mere superficial examination of the subject. The technical mastery in the carving of these jade pieces is as great as, perhaps even greater than, in any previous period of history, and they reveal a power of artistic composition and a harmony of form and taste unattained by European art industry of the same age.'

It is a general rule of criticism that the mere conquest of technical and mechanical difficulties in a work of art gives no claim to high standing. As the difficulties of carving jade under any circumstances, and especially in the designs affected by the Chinese, are obviously very great, it is natural to presume that this common and commonplace, but mistaken, basis of admiration is the special claim of Chinese jades to our attention. That this is not really the case, it is not difficult to show. What we have to understand is *why* the Chinese were disposed to devote, especially to this material, the infinite patience and remarkable dexterity, which the Chinese jade carvings so universally exhibit. It is true that a wholly satisfactory

preparation on the subject of jade would involve an intimate acquaintance with Chinese mythology and history, and with the Chinese temperament. A pregnant suggestion on this head is conveyed by the sub-title of Dr. Laufer's book, above quoted. This book is entitled 'Jade. A Study in Chinese Archæology and Religion.'* Even to quote this title is to suggest that a study of Chinese archæology and religion is a part of the knowledge of Chinese jade. Without attempting to fathom this part of the subject, we may say that Dr. Laufer has done so in a readable way. A sympathetic attitude toward this point of view is certainly desirable.

The general importance of the Woodward jade collection may, however, be described by an account of jade as a mineral, and by an account of the related and various reasons which have led the Chinese to regard it as a sacred and consecrated material, from the earliest times down to the present day. Such a description is therefore attempted here by a summary which is based on the magnificent and exhaustive treatise on the subject which is furnished by the Catalogue of the Bishop Collection in the Metropolitan Museum. The enormous size and physically ponderous dimensions of the two colossal volumes of this Catalogue may serve as a sufficient excuse for this attempt to condense its information for the benefit of the students of the Woodward Collection of Chinese jade carvings.†

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*Field Museum of Natural History. Publication 154.

†The great literary, archaeological, and scientific merits of this work cannot be too highly praised. Among the names of other contributors, those of Dr. George F. Kunz for the mineralogy of the subject, and of Dr. S. W. Bushell (since deceased) for the archaeology of the subject, are those of the highest authority in their specialties. On the other hand, Dr. Laufer's remarks on the obvious demerits of the publication are apt and just. He says: 'Mr. Bishop expressed in the Preface the hope that his book might be found to be of some value as a book of reference. His work is doubtless one of the most beautiful and sumptuous books ever published in this country, but it is a matter of profound regret that its valuable contents are practically lost to science, owing to its unwieldy size and weight (one hundred and twenty-five pounds) and its distribution in only ninety-eight copies, none of which have been sold, but which have all been presented to libraries, museums, and it is said, "to the crowned heads and other great rulers of the world." It would be desirable that the main bulk of the work might be republished in a convenient edition for wider circulation.'

The English word jade is derived, through the French, from the Spanish *piedra de hijada*, 'stone of the loins,' hence named from the belief that it had curative properties in kidney trouble, when administered as a powder. This belief the Spaniards borrowed, together with their first knowledge of this stone, in the early days of their conquest of Mexico, where jade was highly prized. The word 'nephrite,' which is an equivalent term for jade, has a similar meaning and derivation; from the Greek νεφρος, kidney.



Chinese White Jade Pendant of greyish-white nephrite of uniform color and translucent quality. Delicately cut in openwork, in the flat outline of a flower basket, holding flowers and foliage. At the center of the basket is a *Shou* (longevity) character with floral scrolls on either side. Eighteenth century. Height, 3¼ inches.

Under the common term of jade are included two minerals, viz. nephrite and jadeite, both of which are metamorphic rocks, and so closely alike in colors, texture and general appearance that, in many cases, only microscopical tests or chemical analysis can distinguish them. They are, however, distinct in chemical composition. Nephrite is a silicate of calcium and magnesium, whereas jadeite is a silicate of aluminium and sodium. Jadeite has a higher specific gravity and is slightly the harder of the two. It will scratch the surface of nephrite, whereas the reverse is not true. On the other hand nephrite is tougher. Jadeite has a more crystalline character, while nephrite is more

fibrous in composition. These differences are not visible to the eye and the scientific distinction between jadeite and nephrite was first established by Damour, as recently as 1863. It may frequently be noticed, however, that the surface of jadeite has a more brilliant lustre, while that of nephrite is generally more waxy and oily in appearance. Both minerals are found in a large variety of shades and colors, among which various shades of white and green are generally dominant. The very light and bright greens generally, but not invariably, belong to jadeite. The distinction between these minerals is made more difficult by the fact that nephrite and jadeite are occasionally combined in a single specimen.

In terms of geology, both nephrite and jadeite are metamorphic rocks. Jadeite is a metamorphic igneous rock, but the igneous character of nephrite, although possible or probable, has not been so definitely determined. Both are very hard and compact and exceedingly tough; both are more or less translucent in a variety of colors. Both are strikingly alike in general qualities. The hardness of jadeite is not greater than that of quartz, but in toughness and tensile strength, as distinct from hardness, both forms of jade are wholly unrivalled among minerals. Specimens of nephrite have resisted a pressure of over 92,000 lbs. to the square inch and have only yielded to a stress of over 94,000 lbs., after two hours' pressure. A German mineralogist, who failed to shatter a block of nephrite with a sledge hammer, sent it to the Krupp Gun Factory at Essen for farther experiment, to be crushed by a steam hammer. In this experiment the anvil was ruined and the block of nephrite was not injured. Thus jade is more tenacious than granite, steel, or cast iron. This quality, combined with its hardness, makes it analogous among minerals to the temper and hardness of steel among metals and this explains the high estimation in which jade has been held by prehistoric and savage man as a material for stone

implements. These qualities, combined with its great variety, beauty, lucidity, and translucency of color and with its bell-like resonance of tone, tend to explain its unique and surpassing reputation in China, where it is valued more than gold or silver and considered the most precious of all materials.



Chinese White Jade Table Screen, with elaborate openwork carving which shows two fir trees growing amid clustering bamboo trees, creeping vines and clumps of fungus. A crane is introduced among these sylvan emblems of longevity. Eighteenth century. Height, 3¾ inches.

In periods, or among races, to which metal was unknown, jade has been the most highly prized of all stones for the manufacture of implements such as axes, adzes, scrapers, knives, and chisels, on account of its unrivalled combination as compared with other minerals, of toughness and hardness. The great rarity of the stone must have increased the estimation in which it was held. This rarity appears from the fact that in prehistoric finds the number of known implements is small; these finds being mainly restricted, and with relatively rare occurrence under these restrictions, to the Swiss Lake Dwellers, to Mexico, and to a few small celts

(or axes) found in the lower strata of Troy by Dr. Schliemann. The only known prehistoric ornaments of jade (as distinct from implements) are those found in Mexico.

Among the surviving savage races to which the use of metal has been unknown the same rarity holds good. A few battle-axes from New Caledonia, occasional war-clubs, implements, and neck ornaments in the form of grotesque human figures from New Zealand, and occasional instances of scrapers, celts, and knives from Siberia, Alaska, and the American Arctic Esquimaux (of the Northeast) are the most notable instances.

The general scarcity of jade outside of Chinese art is finally and most sufficiently illustrated by the fact that up to recent date the finds of implements in Switzerland and of ornaments in Mexico were supposed by distinguished scholars to imply and necessitate the existence of an ancient commerce with China. It is only within a few years that this theory has been overthrown by the discovery of geologic deposits in Silesia and Alaska.

Thus the rarity of jade in prehistoric finds or in recent savage use, is again explained by its remarkable rarity as a geologic formation, aside from the mines of Chinese Turkistan. The very recent discoveries of mines of jade in Silesia, Alaska, and Siberia are almost unique. Less than a dozen sites are known, so far, where jade has been found as a geologic formation. The general source of supply has been evidently limited to extremely rare, though widely scattered, boulders and pebbles. As far as jadeite is concerned, one mine in Burma is the only known source of supply *in situ*. Nephrite, on the other hand, has only been mined, as far as modern knowledge goes, in Chinese Turkistan. Even in China, where jade has been relatively abundant, as derived from Burma and from Turkistan, no mines are known to exist. The supply of India and of Persia has also been drawn from Burma and Chinese Turkistan. The New Zealanders obtained their jade from river

boulders and they were unable to work the mines which appear to exist in New Zealand. In Chinese Turkistan "jade-fishing" for boulders in the beds of the rivers is also an important occupation. Five hundred workmen are known to have been draughted in a single year for the task of gathering the tribute of jade for China from these river beds. Exactly what methods are employed for working the mines in Chinese Turkistan has not yet apparently been observed by travellers, but the method used in Burma for mining jadeite is to kindle enormous fires under the cliffs to be quarried. The first signs of splitting due to intense heat are the signal for the use of picks and levers. The dangers and difficulties of this work are very considerable. There is much suffering from the heat of the fires and the consequent mortality among the workmen is large.



Chinese Jade Flower Vase, of translucent greyish-white nephrite, with slight brownish marking near the base. Carved in the form of a large 'Buddha's hand' citron, with a multitude of finger-shaped shoots and supported by undercut and openwork coiling stems and leaves. Early eighteenth century. Height, 6½ inches.

As contrasted with the scarcity and extreme rarity of jade outside of Chinese art, it has been here a well known and constantly employed material since the dawn of Chinese

history, which begins to be authentic in such particulars some three or four hundred years before the Christian era. All collections of jade are, in consequence, dominantly Chinese. In spite of this relative abundance, as compared with other countries, 'ancient jade is the rarest and most precious of archaic treasures in China. The Chinese consider jade more valuable than gold or silver. It is classed by them as the first of precious stones. It ranks unquestionably with them as the most perfect material in creation, and as the most beautiful substance in which the thought of man can be embodied.'

To comprehend the extravagant Chinese admiration for this material is also to comprehend the marvels of lapidary art which the Chinese have produced in it, as far as the patience, time, and expense involved are concerned, for it requires much more time to carve jade than it does to carve rock crystal or agate. The Chinese estimate of jade therefore requires serious explanation and in the account of its value for prehistoric implements this has, to some extent, been already given, when Chinese conservatism is considered. What was undoubtedly the most useful, rare, and precious material in prehistoric Chinese use is still the most highly esteemed material in China. Besides the qualities of extreme hardness and toughness already described, the beauty, variety, and translucency of color were an additional stimulus to Oriental admiration. The remarkable resonance of jade is another peculiar quality which gives it importance in Chinese estimation. When struck it resounds like a bell and jade chimes of sixteen pieces and tones are used in Court and religious ceremonies. Other Chinese chimes of jade, known as 'singers' chimes,' range from twelve to twenty-four pieces and tones. Above all, the Chinese religious reverence for jade has been accented in later times by its ancient and still continued use for the most important ritual and ceremonial vessels in the service of the state religion. In ancient days jade was always

employed for the most important religious vessels and shrine ornaments, the less important only being made of bronze.

India, especially, and Persia in a less degree, have also practiced jade carving, but neither country has remotely approached China in its devotion to the use of this material. Jade has, however, been frequently employed in India and Persia for the hilts of swords and grips of daggers. Occasional use is also made of it for ornaments and for costly boxes and vessels. A Hindoo specialty is the incrusting of jade with jewels; rubies, turquoise, garnets, pearls and sapphires; which are sunk into the jade surface and held in position by narrow bands of beaten gold. 'Jewelled jades' are thus almost universally East-Indian, but the method has been occasionally imitated in China.



Chinese Water Coupe, for writer's use; of greenish-grey jade of celadon tint, with light sage-green and brownish marking. Carved with polyporus fungus forms in free relief, and rounded undercutting. (This fungus is an emblem of long life). Early eighteenth century. Height, 6 inches.

It has been already mentioned that aside from several other colors infrequently found, jade exhibits a remarkable variety of shades in green and in white, but these two colors are also found in a remarkable variety of combinations as regards single specimens. One type of these combinations is poetically described by the Chinese as 'bits of moss in melting snow.' White jade is considerably rarer

than green and has the highest place in Chinese estimation, but within the limits of the white jades there are again the distinctions made by Chinese experts which range them into at least ten different qualities and grades. Among these the pure white known to the Chinese as resembling the color of mutton fat or pork fat holds the first rank. Color alone cannot however be made the standard of excellence in jade, for the dimensions of the piece and the art of the carving have naturally also to be considered. Thus, to choose a single example from the Bishop Collection its most famous specimen known as 'the Hurd Vase,' is of green jade. In the jades of prehistoric or ancient Mexican fabric or of savage use green would appear to be the general, and perhaps the universal, rule.

The remarkable difficulties of working jade may be imagined from the description of its qualities as a mineral. In prehistoric and savage use the laborious processes otherwise used in the manufacture of stone implements were followed, but were certainly much more difficult and more prolonged. Exact information on this subject has been naturally obtained with especial ease from New Zealand. As far as China is concerned an extremely exact and detailed account has also been furnished by the quoted Catalogue. The following description of the Chinese methods of carving jade is of interest, not especially because the technical knowledge about these methods is important in itself, but rather because the description of these methods conveys in the most graphic way an idea of the labor, patience, and time required for carving jade. To enter into a description of these methods is therefore to appreciate more fully the Chinese reverence for this material and to appreciate more fully the characteristic Chinese genius which has found expression in these marvellous carvings.

The large rough blocks of jade which are obtained from the mines of Chinese Turkistan and of Burma are cut into smaller pieces by the hand saw, worked by two men,

and usually of wire, which is operated with wet sand. In this process the sand is the effective cutting agent and the saw itself, which has neither teeth nor sharp edge, may be of wire or blunt iron. In all ages the use of a blunt saw with wet sand has been known as the best means for cutting stone. (The New Zealanders cut jade with wet sand and a leather thong.) From the blocks thus transported to China, or otherwise obtained as boulders from the river-beds of Turkistan, others of outer dimensions corresponding to the extreme exterior sizes of the piece to be carved are blocked out by a slicing saw which also owes its effective cutting power to a sand resembling emery powder, which is moistened by water and thus made adhesive to the edge of the saw. The 'jewel sand' used by the Chinese workman for the subsequent and finer operations in the 'wheel cutting' of jade, is generally derived from garnets, but ruby and sapphire sand is also employed. The pounding up of rough jewel fragments to produce this sand and its careful sifting are important preparatory operations for jade carving. The slicing saw is a round steel plate with sharp edge which is fixed on a staff, and this is revolved by a lathe which is worked by the feet with a treadle. The piece of jade is held against the wheel by the hand. Shaping wheels in the form of large steel rings are used with the lathe to remove the sharp edges and corners. Grinding wheels of solid steel with a flat edge are next employed to make the surface uniformly smooth and ready for the ornamental designs. For the delicate carving required to produce the ornament, including elaborate landscape and other intricate subjects, circular steel knives are also employed and these are also charged with moistened 'jewel sand,' but these 'wheels,' sometimes with sharp and sometimes with flat edges, are now small discs of extremely minute dimensions, securely fixed to metal spindle-shaped holders and constantly changed in size to meet the requirements of the design. The lathe is still used to revolve the

cutting disc or 'wheel' and the piece of jade carving is still held in the hand. Thus, as distinct from ordinary carving in which the piece is stationary and the tool is moved by hand, here it is the tool which is stationary and the carving is produced by the art with which the piece is held and moved against the revolving tool. In this particular the lapidary art of China corresponds to that of other countries. Chinese craftsmen possess all the methods known to modern jewelers and lapidaries. Only in the rapidity with which the wheel may be revolved by steam or electricity does the process vary in favor of the latter, while the results obtained by the Chinese art and patience are far more marvellous and far more extraordinary. It has been mentioned that the time required for carving jade is several times that needed for rock crystal or agate.



Chinese White Jade Lotus-Leaf Cup of limpid white translucent nephrite, with greenish tinge. The carved embellishment includes a small lotus flower and a small crane. The details show the veining of the bell-shaped leaf. Seventeenth century. Height, $3\frac{1}{2}$ inches.

For the execution of open-work (or pierced) patterns the entire design is first marked out in small circular holes which are drilled by the lathe with a diamond-pointed borer. The pattern is then sawn out, so as to unite these holes, by a saw, which consists of a bow, with a string of steel wire. One end of the wire, of which the other is already fastened to the bow, is carried through a hole and is then fastened to the opposite extremity of the bow. Wet 'jewel dust' is again employed with this saw, which is worked to follow the design marked out by the drilled holes of the diamond borer. Whenever a hollow space has to be left inside a jade object, it must be first bored with a round steel cylindrical borer, which, after the boring is finished, leaves a round core inside. This core has to be dug out with a steel chisel struck with a small hammer. The sides and bottom of the piece are then ground away to the required extent and thickness. The final polishing is an important operation, which is also effected by wheels revolved by the lathe. Wooden polishing wheels are first used with yellow diamond dust or a paste of colored sand. Leather polishing wheels, also with 'jewel dust,' are employed to give the final finish. The diameters of these wheels vary from a foot to two or three inches and choice is made among them according to the requirements of the work.

The general difficulty attending these various operations in the process of producing a delicate bowl or vase or an intricate piece of carving, may be partially realized by reflecting that the same work would be actually easier if a billet of solid steel of high temper were used instead of a block of jade; for jade is tougher than steel.

The most important recent jade carvings of China have been executed in an imperial work-shop within the walls of the Emperor's Palace at Pekin and the most precious jades of our modern collections first came into commerce

through the looting of this palace by French soldiers during the Anglo-French occupation of Pekin in 1860.

The largest and most valuable collection of jade in the world is that presented to the Metropolitan Museum by Mr. Heber R. Bishop. The sumptuous catalogue of this collection is the only comprehensive and exhaustive treatise on the subject. It may be consulted in the Library of this Museum. An illustrated catalogue of the Woodward jade collection was prepared by the eminent expert Mr. John Getz, during the lifetime of the collector and published by him. Copies of this catalogue will be at the service of all students of the collection. A gracefully written article concerning the Woodward jade bequest recently contributed to the New York Herald by Mr. Gustav Kobbe, referred to this gift as 'enshrining the memory of the generous Trustee who has left in this collection of jade a monument, not only more enduring than brass, but even than steel.' This sentiment offers a fitting conclusion to the present article.

W. H. G.



MRS. JOHN BACON (ELIZABETH GOLDTHWAITE)
From the Painting by JOHN SINGLETON COPLEY, in the Brooklyn Museum.

TWO COPLEY PORTRAITS

TWO very interesting portraits exhibited at the Museum—a loan and a purchase—seem worthy of more than passing notice as illustrating the art of a great early American Painter. Both are the work of John Singleton Copley at what is considered his best period—about 1770—some five years before he sailed for England and Italy never to return.

His own opinion was that his best pictures were painted in America and, with the exception of the Izard portraits, done shortly after he reached England and before he came under the Gainsborough-Reynolds influence, none of his English work seems comparable to that of earlier years. The direct individual spontaneous character of the two portraits mentioned is marked, convincing the beholder that Copley painted what he saw and that only, with simplicity and fidelity and in the spirit of which he speaks in writing to Pelham, his brother-in-law, of the truthfulness of Raphael's painting,—'You will take notice in the "Transfiguration" Raphael has painted warts on some of the faces by thus painting from the life.'

Our portrait subjects should hardly be surprised at finding themselves hanging side by side upon the same wall, even though the surroundings be strange. Elizabeth Goldthwaite, (Mrs. John Bacon), whose somewhat stern but very dignified features are shown on the loaned canvas, was the wife of Rev. John Bacon, a pastor of the Old South Church, Boston, and daughter of Ezekiel Goldthwaite, Town Clerk and Registrar of Deeds in Boston (1740–1776) and Executor of many of the wills of the important men of that town and day. Anstice Greenleaf, (Mrs. Ben Davis), the subject of the second portrait, was a daughter of Stephen Greenleaf, Sheriff of Boston in early Revolutionary days. The Fathers were fellow officers of the town

at the same time and must have known each other; it is not unlikely that the daughters too were acquainted.

The Bacon portrait shows a small, erect woman trim in figure and of straight, clear-cut features, seated sideways, the head slightly turned to face the painter. A strong light plays upon the face and bust, making a marked contrast between the raven hair and dark, keenly observant eyes and the clear pale skin through which shows a soft warm flush. Heavy shadows on the less lighted parts of the head are characteristically used by Copley to enhance the contrast and center the interest upon the face of the sitter. A dainty lace cap is on the head; a twisted rope of pearls coils about the neck; the bodice is a soft warm gray; a scarf of exquisite Mechlin lace covers the bosom; the sleeves are short and the forearms and one hand are shown. Especially to be noted is the accuracy and justness of the tones of the flesh showing through the lace covering the bosom. It is the perfection of art. A certain solid quality there is about all the brushwork very satisfying to the critic. The strong lighting used by Copley is in accord with his own advice to Pelham,—"I would have you very carefull to preserve as much as possible broad lights and shadows only turn the face so that it shall be all aluminated or as much so as possible." In this painting more than in the other there is a keen searching for truth and the character of the subject. As one of her descendants has written, the painter

> '*Seeing her beauty and knowing her worth*
> *Gave her a name and a place in the earth.*'

The colour is warm, especially in the flesh tones and the dress and one finds none of the cold grays and blues which often appeared in his earlier portraits. A minister's wife, calm, thoughtful, somewhat severe, a gentlewoman certainly Copley has truthfully painted. As a critic of that day said of another of his portraits, 'It will be flesh and blood these 200 years to come.'

In passing and as a matter of historical interest only—the Bacon portrait shows directly above the head the thrust (according to family tradition) of a British soldier's bayonet, the spot lightly touched by the restorer so that it may not 'jump' from the rest of the picture.

Quite in another vein Anstice Greenleaf is painted. She is distinguished and handsome, the woman of the world, a patrician conscious of her beauties' power. Less 'aluminated' is the face, the hair dusky, the eyes dark and sparkling. The edge of the hair upon the forehead is studied with accuracy. The shoulders slope in the manner peculiar, it would seem, to Copley's day and possibly exaggerated by him. The bodice, low cut, is of a very delicate pearly gray and from the short sleeves barely reaching the elbow, pushes out spotless fluffy lawn. Pearls are twisted in the hair, band the sleeves below the shoulders and crossing the bosom are knotted to loop up a scarf or shawl of soft brown. A collarette of fine lace circles the neck close under the chin. Refinement and breeding, pride of birth show in the sitter's carriage. There is warmth and beauty of grays and browns and blacks in the colour tones. With a subject, almost beautiful in a conventional sense, Copley though portraying her with freer brushwork and in lighter mood than in the Bacon portrait, does not fail to express her individuality and personality with an honesty rare among the English painters of that day. His love for the elegances of life, delicate tones in dress, pearls, spotless lawn and lace found its pleasure in the painting of Anstice Greenleaf; no painter, unless it be some of the reality-loving Dutchmen, presented such objects more truthfully.

Remembering that Copley was practically the first great American artist of note with little or no early training in Art, with no traditions of painting handed on to him and a public not brought up to appreciation and patronage of the art, we wonder that such fine and lasting work came from his 'pencil' (as the brush was spoken



MRS. BEN DAVIS (ANSTICE GREENLEAF)
From the Painting by JOHN SINGLETON COPLEY, in the Brooklyn Museum's Collection of Paintings.

of in those days). He mildly laments the attitude of the American public in a letter to Capt. Bruce: 'Was it not,' he writes, 'for preserving the resemblances of perticular persons painting would not be known in the place. The people generally regard it no more than any other usefull trade, as they sometimes term it, like that of a carpenter. tailor or shew maker, not as one of the most noble arts in the world.' And in the same letter, still uncomplaining, he says 'My income in this Country is about 300 Guineas a year.'—'Painters cannot Live on Art only though I could hardly live without it.'

It seems a small return for such work as these portraits show and for a man whose work West and Reynolds enthusiastically praised before ever he came to England. 'It is a wonderful Picture,' ("The Boy with the Squirrel") Reynolds says, 'to be sent by a Young Man who was never out of New England and had only bad copies to study.'

A receipt for the Bacon painting, still in the hands of one of the family, shows the customary price—raised a little after his painting visit to New York—for a portrait:

"Boston, Mrs. Elizabeth Cummings
(Bacon) to Jn. S. Copley

Dr.

1769 To her own portrait ¾ length at
* * * * * * * 7 Gins. £ 9 " 16 " 0
1770 To two Black Frames * * * * *
at 24/ £ 2 " 8 " 0

Recd. the contents in full £31 " 16 " 0
John Singleton Copley."

Even a fee of £9-16-0 was not always considered fairly earned in those days. Many men then valued a painter's work as slightly as the Grandfather of Chester Harding, who was one of the later early American portraitists. At a time when Harding was crowded with work and highly considered by those who knew, his Grandfather felt moved

to take him one side and chide him thus: 'Chester, I want to speak to you about your present mode of life. I think it very little better than swindling to charge forty dollars for one of those effigies. Now I want you to give up this course of living and settle down on a farm and become a respectable man.'

The painter of that day must needs have been modest with such unbelieving critics near them and Copley met criticism with words like these: 'I confess it gives me no small pleasure to receive the approbation of so uncorrupted a judgment as that of so Young a Child; it is free from all false notions and impertinant conceits that is the result of a superficial knowledge of the principals of art which is so far from assisting the understanding that it serves only to corrupt and mislead it; unless tempered with a large share of good sence; and might tend to excite some degree of vanity did not my diligence for years past in the study of nature most effectually convince me of this sad truth, that all human productions fall infinitely short of the beautys of nature.'

Yet the pride of the workman in the work of his hands, a forecast truly wonderful for the time in which it was written and a deep love for his native country all speak in the words he wrote to Pelham from England in 1775: 'Poor America! I hope the best but I fear the worst, yet certain I am she will finally imerge from her present Callamity and become a Mighty Empire and it is a pleasing reflection that I shall stand among the first of the Artists that shall have led that Country to the Knowledge and cultivation of the fine Arts, happy in the pleasing reflection that they will one day shine with a luster not inferior to what they have done in Greece or Rome, in my Native Country.'

His prophecies of his country's greatness and his own artistic standing have both been fulfilled.

W. H. C.

THE CORAL REEF GROUP

THE marine group recently completed for the Museum's Hall of Invertebrates, is an attempt to reproduce realistically a scene of supreme beauty and interest—namely that of a Coral Reef. The original reef, upon which the construction of the group has been based, is located near Sandy Cay, ten miles east of Nassau, Bahama Islands, where studies and collections were made in the spring of 1914. A detailed account of the Museum's expedition is given in an article 'Coral Reefs and Coral Islands,' *Museum Quarterly*, January, 1915.

The most luxuriant growth of corals near Nassau is found on the outer reefs, which cannot be visited with safety except in pleasant weather, with little or no wind, on account of the heavy surf that breaks over them. There are, however, interesting coral formations in and near the outlet of Nassau harbor, which can be studied even on somewhat windy days. Noteworthy are the so-called 'sea-gardens,' which few tourists fail to visit.

Reef corals grow in comparatively shallow water, usually less than ten feet below the surface and rarely at a depth greater than twenty feet. So clear is the water in the Bahamas that by the use of a glass bottom boat or a water glass, objects on the marine floor at a depth exceeding fifty feet can be easily seen, while the reefs in shallower water are revealed with wonderful distinctness. At very low tide, moreover, some of the reefs can be explored by wading, but it is essential that stout boots be worn on account of the extremely rough and brittle surface of the reefs. By this method were secured some of the choicest specimens during the Museum's investigations.

The first view of a coral reef cannot fail to arouse



CORAL REEF GROUP, BAHAMA ISLANDS

Reef corals grow in comparatively shallow water. Brilliant fishes dash or glide slowly among the coral grottoes; graceful sea-fans, like flowers swayed by the wind, here are swayed by invisible currents.

amazement and delight. The beauty of construction, the display of color and the infinite variety of life baffle description. It has been the privilege of the writer not only to look down upon these marvelous creations through a water glass, but, lowered in a specially constructed photographic chamber, actually to gaze upon them from the floor of the sea.*

In the aquatic element, brilliant fishes dash or glide slowly among the coral grottoes; graceful sea-fans, like flowers swayed by the wind, here are swayed by invisible currents, and, as the eye follows along valleys of pure white sand, reef after reef is revealed until, not unlike mountains in a landscape growing dimmer and dimmer in the distance, they are lost to view, shrouded in purple haze.

In the construction of the Museum group, introduction of unusual features has been avoided. Faithfulness in reproducing the abundance of life and the beauty of the actual reef which served as a model, has been the aim. Wax models of many of the more delicate animals and careful studies as well as color sketches of all the material used in the group were made in the field.

The coral reef, as represented in the group, is shown rising abruptly from its rocky foundation, supporting in its uppermost part a luxuriant growth of Staghorn Coral, *Isopora muricata palmata*, the dull yellow, white tipped branches of which reach to within a few feet of the surface of the water. The tide is running strong, for the bright colored gorgonians and sea-fans, securely anchored to the side of the reef and in the narrow channel of white sand, all bend in the same direction. Prominent in a smaller reef, separated from the main reef by the narrow channel, is the greenish-yellow head of a fine example

*During the writer's visit the remarkable motion pictures 'Thirty Leagues Under the Sea,' since shown at the Brooklyn Museum and elsewhere, were taken by the Williamson Expedition in the Bahamas. This was accomplished by means of an extensible metal tube, lowered from the deck of a scow and ending in a photographic chamber, equipped with a lens five feet in diameter and nearly two inches thick, through which two persons, comfortably seated in the chamber, could observe the submarine life for hours at a time.

of Brain Coral, *Maeandrina labyrinthiformis*, and at its base, lurking in a crevice, is a large, red Rock Crab, *Carpilius corallinus*. Some other features, easily recognized in the accompanying illustration, are: near the base of the main reef a colony of the Tube Sponge, *Spinosella sororia*, light gray in color; above this colony and at its sides, massive and green, branches of the tree Coral, *Dendrogyra cylindrus;* on different portions of the reef the Passion-flower Anemone, *Condylactis passiflora*, with coral-red base and fringe-crowned disk; silhouetted against the white sand in the channel a brown Sea Star, *Oreaster reticulatus*, and the stinging Sea Urchin, *Diadema setosum*, its long, black spines of needle-like sharpness pointing in all directions. The black and yellow fish, swimming above the large brain coral, is the Rock Beauty, *Holacanthus tricolor*, and in the background are shown the Red Hind, *Epinephelus maculosus*, and the Trigger-fish, *Balistes vetula*, the latter partly concealed by the brain coral. Among the branches of staghorn coral is a school of small fish, the young of the Red Snapper, *Lutjanus aya*.

A difficult problem experienced in the construction of the group was that of securing the effect of illusion as to the realness of the water, its depth and its perspective, at the same time, revealing the reef with a clearness equal to that of the sub-tropical sea. This effect has been obtained by the delicate application of an invisible stain of gelatin to the inner surface of two panes of plate glass, placed three inches apart in front of the group.

The group, a typical example of the coral reefs, found in the Bahamas, is representative also of such formations at Dry Tortugas, Florida, and throughout the West Indies. It is the first in a series of exhibits, planned for the Museum's Hall of Invertebrates, which will deal with the marine life of three very distinct faunal regions of the North American continent, namely the North Atlantic, South Atlantic and Pacific (California) Coasts.

G. P. E.

THE WATERCOLORS OF WINSLOW HOMER
1836-1910

THE general opinion of Winslow Homer up to recent date, which has been ratified and expressed by an abundance of critical utterance, has been that his art was virile, vigorous, rugged, powerful, and remorselessly truthful as a record of what he saw, but that he was eminently a painter who had the defects naturally inherent in these qualities; so that he was lacking in charm, in feeling for beauty, in subtlety of sentiment, and above all, lacking in harmony and tonality of color when compared with a great number of American contemporaries. This last defect was so patent in his earliest oil paintings, and occasionally so apparent in his oil paintings of a later date that the recent exhibition of watercolors at the Brooklyn Museum must have been a blank surprise to a number of Winslow Homer's sincerest admirers. Here was an exhibition covering all periods of Homer's art from the earliest to the latest; well represented for all his great variety of interests, of topics, of localities, and of subject matter. This exhibition must have shaken the orthodox opinion of Homer's art; that it was great without being attractive, that it was honest without being beautiful, that it was splendidly powerful without being tonally harmonized, that it was grand without being delicate. Here were seventy pictures which hung together without one discord, warm and frequently brilliant in color, and impeccable in tonality, some of them even as subtle and tender as a Wyant (but never as weak as Wyant often was)—pictures of flawless execution, of attractive character, and equally attractive, I believe, on the whole, to the most exacting critic, and the most fledgling amateur. I say



WATERCOLOR BY WINSLOW HOMER

Painted at Houghton Farm, Orange County, New York, about 1878. One of eighteen subjects of the same genera quality and [illegible] dating between 1873 and 1878, inclusive, and all loaned by Mr. and Mrs. N. T. Pulsifer

nothing of the power of many of these pictures, of the grandeur of some, of the honesty of all, because these are qualities which every one expects to find in Winslow Homer. Why, therefore, mention them?

What is the explanation of this astonishing revelation of a new Winslow Homer? Is it, for example, that the pictures were carefully selected to hang together by a committee which chose among the works of Homer those which were good in color, and left out the rest? By no means. Seven collectors were represented, and each one sent what he happened to own. As to the hanging, it mainly consisted in placing the works of each given collector together.

The simple explanation is that all these works were watercolors, and that there were two Winslow Homers, the watercolorist and the oil painter. There were two Winslow Homers—perhaps there were three—the oil painter, the watercolorist and the artist who frequently used, but did not always use, in the oil painting of each successive later period the knowledge that he had gained in the watercolor work of the next period preceding. It cannot be denied that Winslow Homer made through life, and to some extent, *in the order of time*, the most astonishing progress as an oil painter. 'Searchlight, Harbor Entrance, Santiago' (Metropolitan Museum) is an oil painting: 'Banks Fishermen' (Charles W. Gould) is an oil painting: both are impeccable in tone and the same thing might be said in other cases. 'Driftwood' is an oil painting and the last one that he finished. It was the one oil in the recent exhibition, and it might have been hung without the slightest clash directly beside the watercolors.

I am far from claiming any originality for the blunt statement that a new Winslow Homer appeared in the Brooklyn exhibition. All that was necessary (but that was a good deal) was to obtain the largest number of Homer watercolors ever seen in public, and to leave out the oils.

The very best critical authority can be cited for Winslow Homer's technical greatness in watercolors, and for his charm as a colorist *in this medium*. The very best critical authority can be cited for the discordant, inharmonious effects of the Metropolitan Museum Memorial Exhibition which was a notoriously well selected collection of twenty-three oil paintings and twenty-eight watercolors. It may, however, be easily admitted that the wide acquaintance with Winslow Homer's watercolor art has mainly begun to grow and make headway since his death, and that the Brooklyn exhibition brought to a climax the gathering force of a revolutionary reversal of some of our most deep-seated ideas about this artist, simply by showing a very large collection of his works in this medium.

A very slight acquaintance with the verdicts of critics as expressed in print, or with the opinions of collectors as expressed in casual conversation, will show that an unqualified and enthusiastic admiration for the Homer watercolors is fast becoming the general rule, if it is not already universal, with the critic and collector class. Thus, some mention and consideration of the recent Brooklyn exhibition appear worth while, if only from the point of view that its sixty-nine watercolors rivalled in quality, and greatly surpassed in numbers the largest similar exhibitions previously held, viz. the memorial exhibitions of New York and Boston of the year 1911, with their respective records of twenty-eight and fifty-two watercolors.

Aside from the large number of exhibits, one other salient feature may be mentioned off-hand for the Brooklyn exhibition. Not only were all the distinctive periods, styles and topics of the Homer watercolors represented in brilliant and standard examples, but they were also represented in fairly balanced groups as regards numbers. Thus Homer's earliest watercolor period which reaches to the year 1878 inclusive, and which began about 1873, was represented by nineteen examples out of sixty-nine. By contrast with

this record, the New York Memorial Exhibition had only three oil paintings and four watercolors for all dates down to 1878 and beginning with 1865, and the Boston exhibition had only two oil paintings and two watercolors, dating to the same limits. On the basis of these figures we may now proceed to develop one of the distinctive merits of the recent Brooklyn exhibition.

It is generally agreed that Winslow Homer's recognized success as a painter began with his residence and work at the seaport town of Tynemouth in Northumberland in 1881 and 1882. The 'Tynemouth period' is a well recognized and distinctive period of his successful work. Not only that, it was also the earliest period of successful work, if we consider the time when the work was being done, as distinct from the time when the work is judged after Winslow Homer's death. This period covers the two or three years following the return to America, when many subjects, besides those finished at Tynemouth, were painted from the preliminary studies and sketches of '81 and '82. These subjects, dating generally between '81 and '84, are well-known to collectors, and to every one who has taken any interest in Winslow Homer. They are as familiar as the Maine coast subjects from Prout's Neck of any date after 1884, inclusive; as the Nassau, Cuba and Florida subjects after 1885; as the Adirondacks subjects mainly after 1889, and the Canadian subjects after 1895. Finally, the Tynemouth years, 1881 and 1882, were immediately followed by the 'Life Line' (1884), 'Banks Fishermen,' also known as 'The Herring Net' (1885), 'Eight Bells' (1886) and other oil paintings which are now classic. But as to Homer's work before 1881, how many of us are familiar with it? Certainly not many of us until the Brooklyn exhibition of nineteen pictures of earlier date made this familiarity possible.

Mr. Downes says: 'The Tynemouth work might be called a turning point in the artist's career as far as popular



SINGLE FIGURE ON BEACH (TYNEMOUTH)

From the Painting in the Brooklyn Museum Exhibition of Winslow Homer Watercolors. Signed 'Winslow Homer, 1884.' Loaned by Mr.

esteem is concerned. There were critics who had found his earlier work crude, harsh and awkward, who hastened to acclaim the English series as masterpieces.'* Exactly so! Now let us enquire how old today these critics may be who, up to 1881, had found his earlier work crude, harsh, and awkward. A man is hardly a critic at twenty-one; let us concede that he might be one, or the beginnings of one, at twenty-five. By such computation a critic who saw Winslow Homer's 'Prisoners at the Front' in the Academy Exhibition of 1866 must now be at least seventy-four years old. A critic who saw 'Snap the Whip' in 1872 (the year it was painted), and who was twenty-five years old in that year, must now be sixty-eight years old. A moment's consideration will reveal the fact that there are not many critics of these present years who were active so long ago. In fact, if any critics now abreast with the times had made their mark at the age of twenty-five between the years 1866 and 1872, I am not aware of it.

'Prisoners at the Front' has disappeared from public view since 1876, about thirty years ago. 'Snap the Whip' was in the Metropolitan Memorial Exhibition, and this exhibition of 1911, with its three oil paintings of 1865, 1872 and 1876, respectively, was probably with exception of the parallel Boston exhibition which had two oil paintings for the years 1865 and 1869, the only opportunity ever offered to the younger generation of critics to make acquaintance with the quality of Winslow Homer's oil paintings before the Tynemouth period.

It is a commonplace in the history of American art that its first good figure painting, since the decline of the Old Master English influence in the late Colonial days, began about the time of the Philadelphia Centennial in 1876, under the influence of the Munich School, and with the return to this country about that time of men like Chase, Duveneck and Shirlaw. Martin, Inness, and Wyant were

*'The Life and Works of Winslow Homer,' Houghton Mifflin Company, 1911.

doing good work in the early seventies, but not in figures. Winslow Homer is the one American figure painter who worked in this country, of the late sixties and early seventies, whose memory now survives as that of a really famous man. Frankly speaking, in those years he was just as much of a 'back number' as an oil painter as any of his contemporaries, and we have just quoted what Mr. Downes says the critics of those days thought of him. It is an amazing thing that Homer was forty-seven years old before he produced an oil painting which is now quoted as representative of his art. He was forty-five years old when he began to paint at Tynemouth, and at Tynemouth *he only painted watercolors.* He was forty-seven years old when he painted the 'Life Line,' forty-eight when he painted 'Banks Fishermen,' forty-nine when he painted 'Eight Bells,' and all his other classic pictures are contemporary or later; always excepting the Tynemouth watercolors.*

Thus we begin to realize the importance of the Pulsifer Collection of Houghton Farm subjects (1873-1878)—eighteen subjects (two from Gloucester)—and of Charles S. Homer's 'Moonlight' of 1874, which were seen in the Brooklyn exhibition. They offer an astounding contrast to the contemporary oil paintings which certain critics, as mentioned by Mr. Downes, had considered as crude, harsh, and awkward. These early watercolors are technically facile, giving the impression off-hand that they were easily done; they are grateful to the eye, of charming composition and sentiment, and attractive in color. It appears absolutely impossible to recognize the oil painter of the same years in the watercolorist of Houghton Farm. Even more might be said—that for harmony and beauty of color these Houghton Farm pictures are superior to many Homer oil paintings of much later date, and of deservedly classic fame. As regards subject they are unpretentious, simple,

*Mr. Kenyon Cox, however, considers the 'Two Guides,' painted in 1876, as the first of his masterpieces. At that date, the artist was forty years old.

country idyls, charming in their rustic sentiment. They offer astonishing contrasts to the rugged power of later days, and are only resemblant in the quality of being an absolutely truthful expression of the given subject matter.

Aside from the rare importance of the Pulsifer Collection (from which only four pictures had ever previously been seen in public), as proving that Winslow Homer had produced a considerable number of excellent and attractive pictures of charming color and exquisite sentiment during the eight years before he went to Tynemouth, the remarkable balance and comprehensiveness of the Brooklyn Exhibition has already been mentioned as regards later periods. There were two pictures for the year 1880, thus uniting the Houghton Farm subjects with the period of Tynemouth. For the Tynemouth period there were six pictures. The Maine Coast at Prout's Neck was represented by eight pictures, of which four were dated respectively for '83, '87, '94 and 1909. There were ten Adirondacks subjects; three for '89, one for '90, one for '91, three for '92, one for '94, and one undated. For Florida, the Bahamas, Bermuda, and Cuba there were fifteen pictures dating from '85 to 1904. For Canadian subjects, there were five pictures, dating from '95 to 1902.

The promoters of the exhibition can claim no credit for this very remarkable showing as regards the even and comprehensive distribution of the exhibits. The catholic tastes and exceptional opportunities of the contributing collectors have, of course, to be considered, and also the accidental but fortunate way in which the strength of one collection supplemented the weakness of another as regards the distribution of dates and subjects. Among the contributors to this exhibition were Mr. Sidney Curtis, Mr. Walter H. Crittenden, Mr. Charles W. Gould, Mr. and Mrs. Charles S. Homer, Mr. and Mrs. N. T. Pulsifer, and Mr. W. A. Putnam.

Having described the special features of the Brooklyn



ON THE SANDS, TYNEMOUTH

From the Painting in the Brooklyn Museum Exhibition of Winslow Homer Watercolors. Signed 'Homer. 1881.' Loaned by Mr. and Mrs.

Exhibition, it remains to consider its significance in the ultimate appreciation of Winslow Homer's art. One way of considering a famous painter is to accept him at the current valuation, and to join in the chorus of enthusiastic praise as though it had always been given as freely and spontaneously at it is to-day. This way of considering Winslow Homer does not appeal to the writer, for several reasons, and especially because it ignores the time of struggle and inappreciation through which most, or all, great artists of modern times have had to pass. To consider the various stages through which Winslow Homer reached his present rank is especially instructive, because the security of his future fame is attested by the slow and gradual progress of his recognition. Moreover, it is much easier in his case than in that of many others to fix the successive stages of this progress. For Homer Martin, for instance, we can hardly fix any stages whatever. He died in extreme poverty, and the sudden rise in value of his pictures dates after his death.

It was mainly as an oil painter that Winslow Homer gained wide public recognition during his lifetime, and many of his oil paintings had notorious limitations, which his watercolors do not share. At the T. B. Clarke sale of 1899, sixteen Homer oil paintings sold for over $30,000, and fifteen Homer watercolors sold for a little less than $3,000. At a much later date Homer is known to have complained bitterly because the public would not buy his watercolors. Moreover, the general realization of the importance of Winslow Homer's art as an oil painter was certainly not much earlier than this sale. And at that date the artist was sixty-two years old! Mr. Downes says, in the biography previously quoted, that 'This sale made a distinct sensation, and from it may be said to date a new standard of material values for first-rate American paintings.' He mentions the prices paid for several pictures: among others, 'Eight Bells,' $4,700;

'The Life Line,' $4,500; 'Moonlight, Wood Island Light,' $3,650; 'The Look-out, All's Well,' $3,200 (to the Boston Museum), etc.

The fact is that knowledge and appreciation of Winslow Homer's oil paintings, as we know and appreciate them now, was extremely difficult before the Chicago Exposition of 1893, and at that date he was fifty-seven years old. It was not till then that a sufficient number of his virile and serious works like the 'Eight Bells' and 'Banks Fishermen' were seen in such combination as to make his rank definitely clear. The gold medal awarded one of his pictures at Chicago was 'one of the first honors of the kind to be given him.' Some good reason for this tardy appreciation, and for the public non-acquaintance with his pictures, may be found in the fact that 'about 1888 he ceased to contribute voluntarily to the exhibitions, or even to pay much attention to invitations to exhibit, and most of his pictures shown after that date were borrowed from owners or from dealers.'

At a much later date many of Homer's most enthusiastic admirers did not fail to note his apparent limitations. Take, for instance, Mr. Mather's review of the New York Memorial Exhibition,* which Mr. Downes mentions as 'the most elaborate and thoughtful review' of that exhibition, although he finds fault with its summing up. Mr. Mather was naturally not responsible for the headlines, but this is what the Evening Post editor made out of his article: 'Winslow Homer's art. Memorial Exhibition at the Metropolitan Museum. An artist who is the more conspicuous by reason of the state of American painting during his lifetime. Many fine works, which being by one hand, are discordant.' Mr. Mather premises that having for many years admired the pictures of Winslow Homer just this side idolatry, the exhibition made him wince. 'It seemed impossible that so many fine works

*N. Y. Evening Post, March 4th, 1911.

by one hand should be so discordant—The vistas revealed no principle of harmony—but a world of ceaseless strife and motion. There is no desire to unify or attenuate the rawness of the thing seen—Some taciturn trapper or skipper reckoning with natural appearances might paint like this—In this Memorial Exhibition of some fifty-seven pictures, two or three quite exceptionally have great charm, but without this demonstration I should have supposed it impossible that so many fine works should have of charm just nothing—He is often harsh beyond the needs of his particular form of expression—color had no preciousness to him intrinsically,' etc. Mr. Mather then continues: 'An interesting and not quite explicable episode in his development is his work done at Newcastle,* England, between 1881 and 1883. *It has an amenity nowhere else appearing in his art*'.† But Mr. Mather does not mention that all the pictures from Tynemouth ('Newcastle') in the Metropolitan Exhibition *were watercolors*, and that this is the universal rule for the given period. Mr. Mather then goes on: 'Within a few years Winslow Homer was in his retreat in Maine, and his work had already assumed that harshness which was to be its characteristic to the end. What caused this swift and radical reaction from the sweet new style acquired in England is a critical problem of some difficulty.' Mr. Mather, having omitted to mention that the Tynemouth subjects, which he has praised for amenity, were all watercolors, comes to the subject of watercolors at the close of his article, and mentions that it would have been desirable to give them a special review or more special consideration. He then adds: 'The watercolors show an easier and more likeable accomplishment. For technical mastery nothing exceeds the sketch 'Homosassa, Florida' * * * I suppose a painter would unhesitatingly stake the greatness

*Tynemouth is near Newcastle.

†Italics by W. H. G.

of Winslow Homer on a few of these consummate sketches, and they are indeed among the unprecedented things.' Now if we realize that the Metropolitan exhibition had sixteen of the southern subjects from Florida, Bermuda, etc., dating from 1890 on, and that the only intervening watercolors between these and the six Tynemouth and neighboring subjects, closing with the year '83, were a 'Trout' and the sketch for 'Hound and Hunter'—we may conclude that Mr. Mather did justice to the watercolors of this Memorial Exhibition, and that the 'critical problem' which he mentions would have disappeared if the break of dating had not occurred in the watercolor series of this exhibition. Let me also say at once, that having read Mr. Mather's article just after a visit to this exhibition, it seemed to me then quite apt and appropriate. His articles have always appealed to me as saying what I felt much better than I could say it myself, and this article appealed to me in that way at the time. I have been tempted to quote it as showing that a critic, who confesses to having admired Winslow Homer for many years, could still write as Mr. Mather did, and also because the quotation points to the importance of such a comprehensive knowledge of the Homer watercolors as was impossible to any of us during his lifetime, with the exception, perhaps, of Mr. Downes.

The importance of this knowledge was suggested by Mr. Downes when he connected his own splendid critique on this subject with his mention of the 'interesting contrast' between the New York and Boston Memorial exhibitions as regards the predominance of watercolors at Boston. The New York Exhibition had twenty-three oil paintings and twenty-eight watercolors, whereas the Boston exhibition had seven oil paintings and fifty-two watercolors. Mr. Downes then proceeds to comment as follows: 'The prodigious ease and simplicity of the artist's watercolor method, the blended delicacy and strength of his style,



MAN ROWING A BOAT

From the Painting in the Brooklyn Museum Exhibition of Winslow Homer Watercolors. Signed 'Homer, 1891.' Loaned by Mr. and Mrs. Charles S. Homer.

its sturdy individuality and distinction, the extraordinary carrying power of his well-defined masses and planes, with those constantly recurring felicities of the most unexpected character which form such a fascinating subject for study, were more than ever manifest in this collection. In this elusive medium he was perfectly at home and expressed himself with stimulating directness and pungency. Prior to the Tynemouth watercolors the dominant note is of an exquisite delicacy of detail, but after that the manner gradually broadens and becomes more emphatic, sweeping, and dramatic, until in the Adirondacks and Province of Quebec subjects of the nineties and later, we mark the full development of that rapid, bold, loose, and authoritative style in which the essentials of the subject are, as it were, flung upon the paper with all the abandon and freedom of a complete master of the art, sure of himself, and exulting in his strength, unequaled and alone in the capacity of forcible and succinct expression.'

This critical valuation of the Homer watercolors in the biography of the artist has been reinforced in the recent book by Mr. Kenyon Cox, in which we find the following passages:* 'There must be reasons, more or less valid, for a preference so vividly felt—felt, at times, by Homer himself—for the watercolors over his more elaborate works in oil, and one of these reasons I have already touched upon; it is Homer's extraordinary technical mastery of the medium. If, from the first, he painted better in watercolors than he was ever able to do in oils, it may be said that, in the end, he painted better in watercolors—with more virtuosity of hand, more sense of the right use of the material, more decisive mastery of its proper resources—than almost any modern has been able to do in oils. One must go back to Rubens or Hals for a parallel, in oil painting, to Homer's prodigious skill in watercolor, and perhaps to the Venetians for anything so perfectly right in its technical manner. . .

*'Winslow Homer,' New York, privately printed, 1914.

Even Sargent's stupendous cleverness in watercolor is not more wonderful, though Sargent seems to be thinking a little of the brilliancy of his method, whereas Homer is thinking, single-mindedly, of the object or the effect to be rendered, and is clever only because he is sure of what he wants to do and seizes instinctively on the nearest way of doing it. . . Following from this technical superiority and closely connected with it is the second, and more important, superiority of Homer's watercolors; they are vastly more beautiful in color than are the best of his oil paintings. Oil painting, in its perfection, is capable of a depth and splendor of color which watercolor painting can never equal, but oil painting as it is generally practiced today, and as Homer practiced it, is relatively poor and opaque in color, muddy and chalky or brown and heavy.'

From this passage we may conclude that Mr. Cox would not have differed greatly from Mr. Mather's estimate of the oil paintings in the New York Memorial Exhibition, as regards the question of color. It should, however, be instantly added that Mr. Cox has also given a most enthusiastic and eloquent appreciation of the oil paintings on account of the serious weight and import of their subject matter, holding that their execution was, on the whole, the most fitting for the given subjects, and laying especial stress on their merits of design and composition as overbalancing all deficiencies in color.

It only remains to guard against the impression so far suggested by this review that Winslow Homer will ultimately be ranked by his watercolors chiefly or alone. The Brooklyn exhibition was a notable illustration of a certain side of his art, hitherto much neglected, that is destined to attract more and more attention. But let us hope that the growing interest of the expert, the collector, and the technician in Homer's masterly and beautiful watercolors, may not lead us to forget the imperishable greatness of his best oil paintings. The pendulum of appreciation may swing that

way for a time, but if it does, it will swing back again. The beginning of the distinctive fame of Winslow Homer was—and the final stage of it will be—that what Millet did for the French peasant, he did for the Gloucester skipper, the Banks fisherman, the Tynemouth fisherwoman and the Adirondack guide. He was the poet of the pathos, the tragedy, the dignity, and the real greatness of their simple lives—'an interpreter of humanity.' 'The Look-out—All's Well' and 'Eight Bells' are among the obvious reminders of his greatest pictures. Better color, or more elaborate execution, or more dextrous painting would not have improved these pictures. They would simply have ruined them.

Winslow Homer has been fortunate in his interpreters, William Howe Downes and Kenyon Cox. Both have struck the right note on the subject of his oil paintings; both have done justice to his watercolors.*

W. H. G.

*The classic work by Mr. Downes, whose title is elsewhere mentioned, is the only complete biography. This article is under great obligations to it for many facts and dates. Mr. Cox's shorter book is an artist's appreciation, of heartfelt and eloquent expression.

NOTES

The first lecture in the fall course arranged by the Department of Natural Science was given on October 30 by Doctor Charles B. Davenport, Director of the Marine Biological Laboratory at Cold Spring Harbor. Doctor Davenport recently visited Australia and New Zealand as the guest of the British Association for the Advancement of Science, spending some time *en route* in Hawaii, the Society Islands and American Samoa. This lecture, entitled 'A Naturalist's Observations in Australasia,' was an illustrated account of the islands at which Doctor Davenport stopped and in it he traced also, the racial characteristics and the supposed history of the various divisions of Polynesian peoples.

The Brooklyn Museum has recently received a donation from the Egypt Exploration Fund, of antiquities from a cemetery at Ballabysh, a locality not far distant from the modern Akhmîm. The interments belong to the XIXth Dynasty, which dates them to about 1300-1200 B. C. Many, or most, of these interments were, however, 'pan graves.' These are so named because the burials, with the attendant objects, are protected by an inverted pan-shape pottery cover. Interments of this class universally contain objects resembling in general character those of the prehistoric period. Thus, with a difference of dating, amounting in the present instance to about 4000 years, even when we reckon only from the end of the prehistoric period which closed about 5000 B. C., the resemblances in the finds are obvious, frequently very striking. We find, for example, in the present collection, pottery of the black top red ware, which, aside from pan graves, is always confined to the prehistoric period, and more especially characteristic of its earlier division. Very little black top ware is found belonging to the second period of the prehistoric time, which probably lasted at least one thousand years, if not longer. Thus, we have the interesting phenomenon of the survival of a type of pottery in pan graves of dynastic times, which distinctively represents the earlier race of prehistoric Egypt, as opposed to the later race, which undoubtedly generally supplanted the former. The conclusion is obvious that at certain points in the Nile Valley this early race had survived in outlying communities which had preserved their original culture, not only after the invasion of the second prehistoric race, but also after many thousand years of dynastic rule. The proof lies not only in the pottery as instanced in the present collection, but also in similar resemblances as regards bracelets carved from shell, the necklaces and bracelets formed of natural shells strung together, the necklaces of minute flat discs of bone and shell, and of unglazed terracotta beads, other utensils of bone, and the goat-skin leather garments found with the bodies. The finds at Ballabysh include a very considerable amount of fragments of leather garments, which are naturally in

deteriorated condition, but still exhibit carefully made seams. There is a pair of leather sandals of very perfect preservation, and there are various remains of rope and cord. Among other pieces of unique character may be mentioned one necklace, which preserves the original string, naturally in a somewhat broken condition, a small pottery vase, ornamented with a mask of perceptibly negroid type, and a rude terracotta figurine with a lioness head, of the goddess Sekhet. The collection includes also a flint knife of very unusual dimensions, about twelve inches long, of remarkably good workmanship. This is a gift from Prof. Thomas Whittemore, who conducted these excavations on behalf of the Egypt Exploration Fund.

The Print Division has received twenty-one etchings by Stephen Parrish and one by Brunet-Debaines, from E. Colonna. Book-plates have been received from W. G. Bowdoin, Arthur Engler, New York Zoölogical Society and George F. Allison.

An exhibition of the etchings, lithographs and other black and whites of three Frenchmen, viz.: Alphonse Legros, Henri Fantin-Latour and Jean François Millet, was held in the Print Gallery, October 31st-November 30th. About one hundred and twenty-five prints were shown from the collections of Paul B. Haviland, Hamilton Easter Field, George W. Davison and Wm. A. Putnam. They included some rare impressions. Eighteen of the twenty-one etchings of Millet were exhibited. Leon V. Solon loaned a portrait in charcoal of Fantin-Latour as well as a study for Saint Sebastian in pencil by Legros.

The Library has received from Mortimer L. Schiff a Portfolio of reproductions of original drawings by Old Masters.

Among recent accessions to the Library are E. B. Havell's 'Ancient and Medieval Architecture of India' and his 'Indian Sculpture and Painting'; Pelham's Letters and Papers of Copley; Price's 'Posters'; Rhead's 'History of the Fan'; 2 volumes of the Royal Society's Catalogue of Scientific Papers; Genera Insectorum: Coleoptera Adephaga; Wilder's Laboratory Studies in Mammalian Anatomy and Mayer's Medusae of the Philippines.

During the Convention of the National Association of Silk Manufacturers, at Paterson, N. J., a remarkably interesting historical exhibition of textiles was held in the City Hall at Paterson, in connection with the Convention. It was organized by Doctor R. Meyer-Riefstahl, of Paris, and was open from the eleventh to the thirty-first of October.

Doctor Meyer-Riefstahl had been Secretary-General of the great Oriental exhibition held in Munich ten years ago, and is a noted critic and writer on the decorative arts.

The historical sequence of the exhibition began with a set of Coptic tapestries

and included rare and beautiful specimens of the main artistic periods, Oriental as well as European, down to the end of the eighteenth century.

The Brooklyn Museum loaned from its collections the following objects: Venetian dalmatica, of cut red velvet and gold thread tissue, Venetian altar front (antependium), eighteenth century French brocade, Chinese theatrical robe, embroidered, Chinese brocade, Manchu woman's robe, Japanese No dance robe, pink, red and gold cope, and Japanese Court robe, green.

The Metropolitan Museum, Cooper Union Institute, The Museum of the Fine Arts, Boston, the Cleveland Museum of Art, the Rhode Island School of Design, and many private owners contributed with loans from their collections to this splendidly selected exhibition. It is hoped that a permanent textile museum will come into existence, and perhaps nowhere is there a city better suited for such a museum than the City of Paterson. Judging from the interest awakened by the temporary exhibition, such an institution would exert a vital influence on the entire textile industry.

In the Department of Fine Arts the following accessions have been recorded: Two embroidered hand screens, six terra cotta figurines by Delmas, dated 1853, three old manuscripts on vellum, a hand painted eighteenth century French fan, a lacquer eighteenth century Chinese fan, an ivory eighteenth century Chinese fan, and an eighteenth century French embroidered shawl collar, gifts of Mrs. Ellen M. Austen; six Hepplewhite chairs, gift of George D. Pratt; eighty pieces and lots of Egyptian antiquities from Ballabysh, XIX Dynasty, mostly from pan graves, acquired through the Egypt Exploration Fund; one water color by Winslow Homer, loaned by William A. Putnam; twenty water colors by Winslow Homer, loaned by Charles W. Gould; two water colors and one oil painting, loaned by Frank L. Babbott; and an Early American panelled corner cabinet, purchased from the Henry Batterman Fund.

An Irish newspaper, the *Mayo News*, has recently published an account of a new church now building at Newport, County Mayo, Ireland, in which various architectural refinements have been introduced, which were brought to the notice of Irish architects by the Brooklyn Museum architectural photographs which were exhibited in Dublin in May, 1914. The Archbishop of Tuam laid the foundation stone of this church in May. The architect is Mr. R. M. Butler, the editor of the *Irish Builder*. Among the architectural refinements which have been introduced in this church,—all of which were unknown to modern architects, as well as antiquarians, until the Brooklyn Museum surveys, which were carried out by Mr. Goodyear,—the following may be mentioned: the floor of nave and aisles sloping upward; convergence in plan of the nave in its length from west to east; variations in dimensions of the bays of the nave arcade and the 'widening refinement.' The great interest of the publication in the *Mayo News*, which has been corroborated and supplemented by a personal letter from

Mr. Butler to Mr. Goodyear, lies in the fact that the Newport church is the first modern church, and the first church built within the last three hundred years, in which the 'widening refinement' has been employed. In fact so utterly had the use of this refinement been forgotten that even the tradition of its former existence had disappeared until the revelation offered by the photographs of the Brooklyn Museum. The 'widening refinement' in the Newport church consists in an outward vertical divergence of the walls of the nave, amounting to 6 inches to a side. Where such divergences have been noticed in ancient churches they have hitherto been ascribed to accident,—thus the actual construction of this refinement in a modern church is memorable, not only as the first instance of a revival in modern times of an ancient practice, but is also memorable as a practical answer to the wide-spread skepticism which has considered the existence of such refinements as purely accidental results of vaulting thrust.

The fourth annual exhibition of the Brooklyn Aquarium Society was held in the Museum on Thursday, Friday, Saturday and Sunday, September twenty-third to twenty-sixth, inclusive. During this period over 14,000 persons viewed the display, despite the inclement weather on Sunday.

There were 250 special entries, comprising all classes of fish, from the tiny tropical and live-bearing species to the regal Moors, Calicos, Lion-heads and other prize winning specimens.

Just at the right of the entrance was the special exhibit of Charles E. Visel, to whom a diploma was awarded for the largest and best display. Immediately beyond, was exhibited a sixty gallon balanced aquarium, by Mr. A. A. Phillips, junior, to whom a diploma for the largest balanced aquarium was awarded.

Passing along the aisle, the beautiful table of Mrs. Marie Maier attracted much attention. It consisted of a number of tanks, many of which have been set up for years. One in particular which elicited considerable comment was awarded a diploma for the finest small balanced aquarium.

In close proximity, Mr. William H. Heimback, of Allentown, Pennsylvania, showed his beautiful calico fish which won the fourth diploma, offered for the four best fish on exhibition, owned by an out of town exhibitor.

The aquarium containing the young fish entered by Mr. F. G. Schaeffer of Philadelphia, was a center of interest. In color and contour they were remarkable, and their beauty was enhanced by the unusually fine aquarium, the property of Mr. F. P. Johonnot, of Brooklyn, in which they were displayed.

At the extreme left of the display was the exhibit of Mr. Herman Rabenau, of Brooklyn, including many specimens of wild fish, procured just prior to the exhibition in Virginia, where Mr. Rabenau went especially in the interest of the Society.

A feature which proved decidedly popular, was the display by Mr. Wm. Tricker, of Arlington, New Jersey, of flowering aquatic plants, lilies, poppies and hyacinths in full bloom.

The aquatic plants in the majority of tanks were provided by the New York Botanic Gardens, Bronx Park, New York.

Several truck loads of decorative palms, and other plants, loaned by the Park Department of Brooklyn, added materially to the dignity and beauty of the exhibition.

The judges were: Gold fish, Mr. Wm. T. Innes of Philadelphia; tropical and wild fish, Doctor E. Bade of New York City; and balanced aquaria, Mr. W. C. Lantrect, of Brooklyn.

Many of the exhibits were shown in the new peerless aluminum frame aquarium, loaned by Mr. J. J. Holgerbeck, of New York, and which were described in the October issue of '*Aquatic Life*.' The exhibition was in the entire charge of the Annual Exhibition Committee, Messrs. Froehlich, Johonnot, Visel, Donovan, and Wilcox.

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